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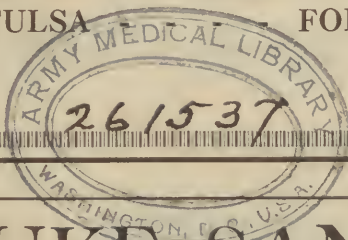
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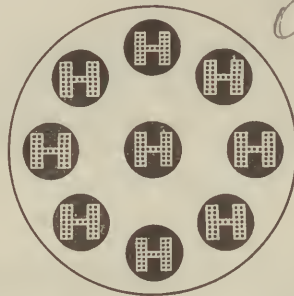
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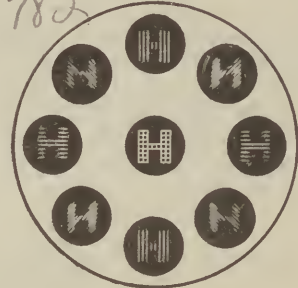
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# THE JOURNAL

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## OKLAHOMA STATE MEDICAL ASSOCIATION

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No. 1

### ETHMOID AND SPHENOID INFECTIONS\*

JOHN R. WALKER, M. D.

ENID

The subject of infections of the nose has been so extensively investigated, agitated, exploited, and I might say exaggerated, in the past few years that it would be unprofitable in this paper to present, even a small part of the enormous amount of statistics collected and compiled by various investigators. While some of the work is of great importance, much of it is confusing and misleading. Of all the foci of infections of the nose and throat I consider those of the nasal accessory sinuses the most potent for harm, and particularly is this true in young children. It is variously estimated that from 80 to 95 per cent of all trouble in the upper respiratory tract of children is preceded by a nasopharyngitis, or an infection in the accessory sinuses. These sinuses are very likely to be the seat of your infection, first, because of their situation at the entrance of the respiratory tract, and second, because their peculiar mechanical and anatomical construction is such that they readily collect, retain and foster the growth of pathogenic germs.

When our foe is in the ethmoid or sphenoid sinuses we are confronted with a difficult problem. When the infection is in the tonsils, or a tooth, by co-operation and conscientious work we can remove the offending members and throw it away. With the paranasal sinus infected the best we can do is to ventilate, drain, curette, etc., and hope that by weeks of after treatment the condition will be eradicated; in the meantime drainage continues, and while efficient drainage removes very much of the menace it does not eradicate it. Putting the figures very small I doubt if 30 per cent of our cases of chronic suppurative ethmoiditis in adults ever get well. During the summer months, or in the hot dry weather, the discharge ceases, or if your patient makes a change to the proper climate his trouble may disappear, but if he remains in the Mississippi Valley, when our winters return with their damp changeable weather, the trouble reap-

pears. The prognosis of paranasal sinus infection is controlled largely by a patient's finances and his ability to seek the proper climate.

In infants and children with a chronic paranasal sinus infection, our prognosis is much more favorable. Dr. Dean says 80 per cent of these infections can be eradicated by simply removing the lymphoid masses in the naso-and oropharynx. The question arises how early in life should we try to eradicate the chronic paranasal sinus infection. Most authorities say this should be done in early childhood, but from this statement I am unable to fix any certain age. In my own work it is a rare case where I would do any operative work on the nose or paranasal sinus under 10 years of age, and only in the most unusually severe cases would I sacrifice any turbinate tissue.

The diagnosis and treatment of ethmoid and sphenoid infections have received the attention of many writers and volumes have been printed setting forth the views of different men, but this part of the subject is too big for us to even approach in this paper. But there are some things we should remember, first, it is very difficult to diagnose; second, it is more difficult to treat; third, when your diagnosis has been established it is most difficult to eradicate.

The most experienced operators do not claim to know when they have drained all the diseased cells.

Paranasal sinus serve as foci of infection in children as well as adults, but it is rare to find the paranasal sinus a focus in a child under 3 years of age.

Ethmoid cells are always present at birth, and the development varies very much. At the age of 5 years a child may have a very large sphenoidal sinus or he may not have any. In infants or young children, when paranasal sinus disease is suspected, it is well to determine what sinuses are present by use of the X-ray and of those present those of any clinical importance. Just a word here about the X-ray. I would not depreciate its value but it is often misleading and may prejudice the surgeon in arriving at a correct diagnosis. It frequently tends toward a careless physical examination and a neglect of accurate history taking. The perfection and almost universal

\* Read before Section on Eye, Ear, Nose and Throat, Annual Meeting Oklahoma State Medical Association, Oklahoma City May 13, 14, 15, 1924.

use of the X-ray has placed in the hands of technicians who are totally untrained in medical science, the means of demonstrating to the patients, satisfaction, and oftentimes to the physician and surgeon as well, conditions that do not exist, or that have little or no influence upon the disease from which the patient is suffering. The interpretation of an X-ray plate can only be made correctly by an expert who understands the physiology, anatomy, and pathological changes that are common and may be found in the parts to be rayed. After hundreds of comparisons with the actual findings in the operating room one might venture to interpret a radiograph with some assurance, but it is wise to be guarded for the X-ray is often a treacherous ally. A thorough clinical examination, a painstaking history of the case, carefully reviewed by the physician and surgeon, will often reverse a diagnosis made upon the X-ray findings.

The hawking and spitting of a postnasal discharge so common in adults, sneezing, nasal discharge, nasal stoppage, recurrent colds, headaches are all symptoms of paranasal sinus disease. In children with diseased tonsils and adenoids paranasal sinus disease is very common in our winter months, and disappears during the summer months.

The prognosis of paranasal sinus disease in children and infants is very much better than adults. Many adults can trace their incurable paranasal sinus disease to early childhood. In children, where we remove tonsils and adenoids, for a systemic disease, we always ask that the child be returned, if it shows any indications of a persistence of focal infection. It is in these cases that a most careful examination of the paranasal sinus reveals the presence of a paranasal sinus disease. In short, I think whenever you remove diseased tonsils and adenoids from a child and you do not get the great improvement you naturally expect, then paranasal sinus disease should be expected, unless perchance you should have syphilis or some obstructive lesion of the nose.

### THE TREATMENT OF SINUSITIS IN CHILDREN\*

J. C. BRASWELL, M. D.  
TULSA

Infection of the sinuses in children received little recognition until recent years. The pioneer work of Onodi and Killian opened the field for further investigation of this most interesting affection, and many valuable contributions

have been made by Coffin, Coakley, Dean, Skillern and others. The difficulty encountered in diagnosing and investigating affections of the sinuses in children may account for the delay in the progress of this line of work.

The sinuses are not fully developed at birth, yet they offer an avenue for infection which is frequently overlooked. Because of the early development of the ethmoidal cells and maxillary sinuses, infection may easily occur in these sinuses during infancy. According to Schaeffer, the maxillary sinus is usually present at birth and increases in size about 2 mm. each year until the eighth year. After this period, the sinus gradually increases in size until the fifteenth year, when it reaches adult size.

The ethmoidal cells are divided into two groups, and are always present at birth. Dean found at autopsy a very bad case of chronic suppurative ethmoiditis in a child sixteen months of age. Because of the early development of these cells, the infection can and does occur during the first year.

The frontal sinus is in reality a continuation of the ethmoidal cells, as the sinus does not develop until the ethmoidal cell extends into the frontal bone. This sinus develops slowly, and it is usually the fifth year before it warrants investigation as an individual sinus. The size and number of the frontal sinuses depend upon the extension of the ethmoidal cells. Operations have been reported as early as the fifteenth month in an infant with frontal sinusitis, but such cases are unusual as the frontal sinus is rarely involved under the age of eight.

#### Etiology:

In a large percentage of adults suffering from sinusitis a definite history of nasal infection during childhood can be obtained. Careful investigation by the general physician of the sinuses in children will be the means of arresting infection and preventing serious complications.

Climate plays an important role in the occurrence of sinusitis in children. In cold, moist climates where changes occur frequently, sinusitis is very common; whereas, in dry hot zones the infection in relatively rare and responds with rapidity to treatment.

Infection of the sinuses is frequently secondary to infections of the upper air passages and acute rhinitis followed by a slight nasal obstruction is too often the etiological factor in sinusitis. Sinusitis is frequently associated with the acute infectious diseases of childhood. Diseased adenoids and tonsils infect the sinuses by contiguity of tissue and mechanical obstruction. Deflected septa are common in

\* Read before Section on Obstetrics and Pediatrics, Annual Meeting Oklahoma State Medical Association, Oklahoma City, May 13, 14, 15, 1924.



late childhood and should be considered as etiological factors.

I am of the opinion that the so called faulty nose blowing habit is responsible for innumerable cases of sinusitis in children. During an acute cold, in an effort to free the nose of obstruction, one is prone to close off one nostril and use great force in the endeavor to clear the obstructed side. This act increases the pressure in the nasopharynx and nasal passages and too often secretion is forced into the eustachian tube and sinuses. In support of this theory the timely discussion of the physiology of sneezing by Brubaker cannot be omitted. He states that the lower animals seldom have suppurative diseases of the ear or sinuses of the nose as the animal has only one means of clearing the nose and this is accomplished by sneezing.

#### Symptoms:

Nasal obstruction and nasal discharge are the symptoms usually found in children afflicted with sinusitis. In young children, the discharge may not be noticed in the anterior nares as it frequently passes into the nasopharynx and esophagus. In order to determine the origin of pus in the nose, a very careful examination and investigation should be made. If the pus is found in the region of the sinus orifice and reappears after being wiped away, infection of the sinus is present, as the nasal membrane cannot produce pus so rapidly.

In acute sinusitis the temperature may be quite high, often reaching 105 degrees F. Headache and a sense of fullness is soon noticed. The headache may be very severe or mild. The pain usually depends upon the drainage in the affected sinus. With good drainage pain may not be present; but allow the orifice of the sinus to be closed, and the pain becomes severe.

Pain is seldom present in chronic sinusitis, as there is usually an opening which permits sufficient drainage to prevent pressure symptoms.

Children suffering from sinusitis are usually listless, undernourished, and have poor appetites. In a series of fifty cases I have found the loss of weight to range from five to thirty pounds, with an average loss of seven pounds. The hemoglobin was below normal in eighty per cent of these cases. Following treatment of the sinuses and dietetic corrections there was marked improvement in all cases.

#### Diagnosis:

A careful examination of the anterior nares, throat, pharynx and nasopharynx should be made in all cases. If pus is found in the nose it should be carefully wiped away and the ex-

amination repeated in a few minutes in order to trace the origin of the discharge. In some cases it is advisable to shrink the membranes of the nose with small cotton pledgets saturated with a solution of adrenalin in order to permit a more thorough examination.

Transillumination is a valuable adjunct in some cases where the bones are not too dense, however this method is limited to a group of cases in which the co-operation of the patient is essential.

X-ray examination of the sinuses is very important as it offers the means of establishing the presence of a sinus. Without such an examination it would be impossible to outline the size and location of the sinuses. In some cases the development is more rapid than in others, and in the case of the frontal sinus it is essential to know if the sinus be present. Due to the thickness of the bone, a shadow may be present in some cases when the sinus is negative. In certain cases the film does not show the presence of pus as clear pictures have been obtained where pus was later found by puncturing the maxillary sinus.

In the examination of the maxillary sinus it is frequently necessary to puncture the sinus in order to establish a correct diagnosis. This is easily done by the endonasal route, using a curved trocar. In infants and young children the X-ray plate should be carefully studied in order to ascertain the exact location of the floor of the sinus to the attachment of the inferior turbinate. If the floor of the sinus is above the inferior turbinate the puncture is made through the middle meatus. Dean and Armstrong have perfected a technique for culturing the contents of the maxillary sinus without contamination from the nose or nasal wall.

X-ray examination in conjunction with examination of the nasopharynx establishes the diagnosis in sphenoidal sinus infection. If the sphenopalatine ganglion be involved the pain is often very severe and extends to the parts supplied by the branches of the ganglion.

#### Prognosis:

The prognosis in acute sinusitis is usually good if the condition is seen early and the proper treatment immediately instituted. When the affection occurs in an infant with a cleft palate, the infection may temporarily clear up to recur within a relatively short period. Unless some grave complication occurs the acute infection responds very well to treatment.

#### Treatment:

In acute sinusitis a good purge, rest in bed, forced fluids and a restricted diet are all that

is required in the majority of cases. The patient should be placed in a well ventilated room, with an abundance of fresh air. It is essential that the child be so housed that it may have an opportunity to play from time to time as hospitalization without this privilege fails to accomplish the desired results. Dean advises douching the nose with a normal saline solution, but this method cannot be commended in all cases as the innocent sinus and eustachian tube are frequently infected by douches and irrigations.

Diseased tonsils and adenoids should be thoroughly and completely removed in cases of sinusitis of a chronic type. Many cases of chronic sinusitis persist for an indefinite period if the adenoid and tonsil tissue is not thoroughly removed. Dean thinks that fully eighty per cent of the chronic cases are cured by this method.

Chronic infections of the nasal sinuses in children respond rapidly to treatment but many appear as resistant to treatment as in the adult. In these cases it is essential that all foci be removed.

In a recent series of fifty selected cases I have used a twenty-five per cent solution of argyrol followed by mild and gentle suction, with gratifying results. The argyrol is used to shrink the membranes, and is applied by means of small cotton pledgets placed in the meatus of the nose. Argyrol has the advantage of shrinking the membranes without the after reaction so commonly observed following the use of solutions which prove to be irritants. A portable water suction apparatus with five feet of rubber tubing and a glass nasal tip is sufficient to carry out the treatment at home, hospital or office. By the use of some simple suction method one assists nature to remove the pus from the sinuses. It is seldom necessary to use this treatment more than two times a day, however, there is no objection to more frequent use. By the use of some simple water suction apparatus the pressure is easily regulated, and by crying or pronouncing the letter "K" the child closes off the pharynx and the discharge is readily withdrawn from the nose. This method of treatment can be used in infants with success. Two cases of maxillary sinusitis in this series did not respond to this form of treatment, and it was necessary to open the antrum by the nasal route in order to establish better drainage. In eighty per cent of the cases in this series there was no evidence of pus in the nose or sinuses at the end of two weeks. Surgery was not resorted to in any of these cases.

The common method of dropping solutions in the nose is without value as the drop usually

lands in the inferior meatus and is expelled from the external orifice or passes into the pharynx in a few minutes.

The faulty nose blowing habit should be corrected as soon as possible in order to promote rapid recovery.

Surgery should only be used as a last resort, as mutilating operations in children are rarely indicated.

#### Conclusions:

Sinusitis is very common in children.

The ethmoid labyrinth and the maxillary sinus are more frequently involved.

A faulty nose blowing habit following acute colds is a very common source of infection.

The prognosis in acute sinusitis is good provided conservative methods are adopted

In chronic cases it is essential to completely remove diseased adenoids and tonsils.

Nasal suction will promote drainage and hasten recovery in acute and chronic sinusitis.

Surgical interference in the treatment of sinusitis in children is rarely indicated.

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#### POST OPERATIVE ILIUS\*

L. A. HAHN, M. D.  
GUTHRIE

Intestinal obstruction following operation is at once, one of the most serious of complications that confronts the surgeon, and there is nothing that taxes his ingenuity and resources, as does this most distressing condition.

The two main causes are, disturbances of the innervation, and the interferences of circulation.

The cause of this disturbance of innervation is said by some to be traumatism to the parts by unskilled handling during operation, or it may be due to a necessary traumatism in breaking up inflammatory adhesions.

But there is one other great cause which I believe is productive of more than seventy

\* Read before Section on Surgery and Gynecology, Annual Meeting Oklahoma State Medical Association, Oklahoma City, May 13, 14, 15, 1924.



five per cent of all cases of obstruction, and that is infection.

How often have we talked about early operation in appendicitis with a view of getting every body interested in seeing that the case is brought to the operating table before the appendix in gangrenous or is ruptured. Yet these suppurative cases continue to come. And the least we can expect in these cases is a localized peritonitis.

We operate and remove the appendix, put in a little drainage tube and every thing goes well, until we decide there should be a bowel movement. Some surgeons decide this on the third day, some on the fifth. Some believe that cathartics should be given and some are quite sure they should not be.

In my own practice, in these suppurative cases I wait until the fourth or fifth day, if they do not move of their own accord I give a mild cathartic and this is usually sufficient. If we have obstruction it becomes evident most frequently at this point. However the first case I had to deal with, happened three weeks after a drainage case of appendectomy.

The patient had apparently recovered and had traveled three hundred miles to his home, when he fell into my hands with grave symptoms of ileus. In this case it was a mechanical obstruction, a kinking of the bowel caused by an attachment of the omentum, which was easily relieved.

It may also occur early even within the first thirty six hours following operation. Vomiting of such nature may occur, as to immediately apprise us of this dreaded condition.

Our first task is to decide the kind of obstruction, whether mechanical or paresis due to the spreading of the already existing infection.

The location of the obstruction must also be ascertained if possible as this is most important in locating the incision on the abdomen. Occasionally a small band of adhesion is the cause of obstruction in which case relief could be accomplished by the simplest of operations which would be the breaking up of the adhesion.

As this paper deals more with the type of post-operative obstruction due to the extension of the infection of the peritoneum, we are dealing with a paralyzed bowel. This paralysis is due to a poisoning with the toxins produced in the duodenum. This paresis might be so mild in some cases as to amount to merely an inhibition of the intestinal musculature.

It is this class of cases that respond to the use of pituitrin. I wish to say here that

pituitrin ought always to be used with caution. Just recently a case came under my observation which was a young girl ten years of age, who had a case of appendiceal abscess. She developed acute intestinal obstruction. A liberal dose of pituitrin was administered. The violent peristalsis that followed ruptured the bowel at the point of drainage. This in itself gave relief but also demonstrated the power of pituitrin which might have had disastrous results as well as the benefit that was derived in this particular case.

We have two conditions to combat, one is the poisoning from absorption of the bowel content, the other, dehydration of the tissues. The exact nature of the toxin in the bowel is not well understood but its effect of producing symptoms such as vomiting, fall of blood pressure, disturbance of temperature, followed by collapse and death, are well recognized by all who do any considerable amount of surgery.

The paralyzing effect of these toxins on the splanchnic, the plexes of Meissner and Auerbach, are sometimes spastic sometimes atonic. Recently we opened an abdomen which showed a peculiar condition. There was a spastic paralysis of numerous short sections of the ilium in which the bowel was narrowed down to a size of a lead pencil. An enterotomy was done above these contractions which gave relief of the obstruction symptoms, later the condition cleared up without further interference.

Gastric lavage in this condition has been practised for many years, and since the advent of the duodenal tube we can also flush the duodenum and thereby reduce absorption of this toxic material. It is possible through this tube after having emptied the upper intestine, to introduce some stimulating fluids. Introducing this fluid has given immediate relief in some cases that seemed to be of the intractable type of paresis.

With this duodenal tube in place it seems to me that it would be easily possible to introduce the barium fluid which would find its way to the seat of obstruction and with the aid of X-ray we would be able to determine the location of our trouble. This would be a tremendous advantage in locating the site of trouble previous to opening the abdomen. The most effective means for combatting dehydration of the tissues, are frequent intravenous injections of normal saline solution.

After these palliative measures have been instituted we come to the main object of the paper, which is a plea for early operation in intestinal obstruction. The morality is tremendously high and has been given by various

observers as more than fifty per cent, which I believe is partly due to a lack of promptness of action on the part of the surgeons. We are always expecting the matter to right itself a little later on. I believe that interference should be undertaken within the first twenty-four hours after the onset of symptoms and before the patient is moribund, or nearly so. The operation of enterostomy is the one employed by most surgeons and the one I use in my own practice is that of securing the intestine to the margin of the peritoneum. I do this under local anesthesia and have gotten relief in most cases.

Anastomosis seems to be the operation of choice with some surgeons by which I mean a short circuiting of the bowel eliminating the obstructed loop. Harrigan points out the great advantage of iliotranscolostomy in that toxic material which has been retained in the ilium can be quickly transferred into the colon and gotten rid of without further absorption.

As this operation has to be done on a patient who is already weakened from operative procedure, with infection present, I believe that as a life saving measure the simple enterostomy as outlined above will produce the best results in the hands of the general surgeon.

The operation of ileostomy with a rubber tube as practiced by Charles Mayo also has its advantages. But so far as I have been able to ascertain operation for closing the fistula is required as often as in simple enterostomy.

Whatever the operation of choice let us do it early and thereby reduce the mortality, which seems to me is much too high at this time.

### THE BILE IN HEALTH AND DISEASE\*

JOHN W. RILEY, M. D., F. A. C. S.  
OKLAHOMA CITY

Let us take a trip down the "Biliary Aqueduct" through a region that revels in mystery and wonder; and made famous by the explorations and conquests of Hanot, Laennec, Rose-now, Graham, Sweet, Deaver and numerous other physiologists and pathologists.

Let us pause for a few moments at the great cavern of psychic medicine, the Gall Bladder, whose walls no human eye has ever seen to contract, but whose contents, through the intervention of rubber tubing, and magnesium sulphate has been shown to admiring thous-

ands. Time forbids us to linger long.

We hurry along through the general drainage canal of Lyons, through Meltzer regulated Ampulla of Vater into the great temple of chemistry, the duodenum.

No organ in the body has held its secrets more tenaciously than has the liver; and no study has been of greater value than that pertaining to the physiology and function of the liver. Our idea in regards to the secretion of the bile and its relative importance as a toxic substance, as a result of recent study, has been renovated.

The lymphatic origin of cholecystitis; hepatitis; cholangitis and pancreatitis has been very largely accepted; and the knowledge of their intimate association has been largely the result of study and observation of the clinician, surgeon and physiologist.

#### Bile Formation:

Bile is secreted as a thin watery fluid by the liver cells and is afterwards mixed with mucin, which is secreted by the epithelium of the bile channels. This gives it, its viscid characteristics.

Its color and chemical composition depend to a certain extent on the blood supply to the liver. The so-called colorless bile is usually found in cases of extensive changes in the liver. This has no relation to the white bile found in hydroids of the gall bladder.

The total 24 hour output has been variously estimated from 16 c.c. to about 1200 c.c. The quantity depends on the amount of blood which flows through the liver.

The production of bile is probably through a hormone stimulation, like the pancreatic secretion. The presence of acid chyme causes continuous flow of bile as long as it is needed. The secretion of the bile probably decreases when the interductal pressure is equal to 350 mm. water. It does not cease entirely at this pressure and is probably absorbed into the blood stream at the margin of the liver lobules during the time of pressure.

Specht conducted a series of experiments on the influence upon the secretion of the bile, after the administration of fluids, preparations of internal secretory glands, and various drugs.

The secretion in the dogs was about equal upon the various foods, except meat.

The ingestion of milk, or of physiological salt solution by mouth, intravenously or subcutaneously did not cause a greater flow of bile than followed dry feeding. An increase of bile occurred after feeding meat.

The amount of bile was the same for day and night. The specific gravity was practically

\* Read before Section on Surgery and Gynecology, Annual Meeting Oklahoma State Medical Association, Oklahoma City, May 13, 14, 15, 1924.



constant. The solid matter did not vary as a result of any of the experiments. There was no relation between the sodium chlorid intake in the food and the amount in the bile. It was concluded that bile and urine were independent in function.

The administration of "thymoglandal" caused only occasional slight increase in bile.

"Adrenalin" caused a marked increase in bile.

"Extract of anterior pituitary" caused a distinct increase of bile. No other substances showed any effect in bile flow.

Gundermann concluded from his experiments that the secretion of bile is independent of the fluid intake, but that the latter has an effect on the urinary output. That the sodium chlorid content of the bile was very constant and independent of the amount of salt taken in the food.

The combined output of bile and urine varied in different animals, but usually was below the total fluid intake.

In 1856, Claude Bernard observed the stimulating effect of acids upon the duodenal orifice of the sphincter of Oddi.

Heidenhain—1861, Rutherford—1880, observed the action of nitrohydrochloric acid in the duodenum on liver secretion.

Wertheimer—1890, observed the action of acid in the duodenum or jejunum on secretion of bile.

Starling—1892, observed the action of intravenous injection of secretin in its effect on secretion of bile.

Fleig—1904, observed the increased flow of bile after the intravenous injection of blood from an isolated loop of duodenum and jejunum in which 5 per cent hydrochloric acid had been injected into the lumen.

Prevost and Benet—1888, observed that peptone accelerated the flow of bile.

Meltzer in 1917, applied the law of contrary enervation.

Lyon used magnesium sulphate 25 per cent, as a chemical messenger hormone.

Jacobson and Jedyson as a result of their observation on the Papillæ of Vater from application of 25 per cent magnesium sulphate, 5 per cent peptone solution, 4 per cent hydrochloric acid, 4 per cent sodium hydroxide, believe there is only a local reaction, which is of short duration and effects both the Papillæ of Vater and the surrounding duodenum.

Magnesium sulphate was found to produce a momentary relaxation of the sphincter of Oddi; and a reduction in the intraductal pressure of 50 to 100 mm. water. They failed

to observe any contraction of the gall bladder or expulsion of its bile contents.

Crohn, Reiss and Radin failed to observe contraction of the gall bladder.

Dunn and Cornell, in a human subject with duodenal fistula, gall bladder and common duct removed were able to get A. B. C. D. bile of Lyons.

Diamond found that it is obvious that the gall bladder never empties itself completely in the manner of any other contractile viscus.

He found that carmin placed in the gall bladder remained for a long time. He further believes that the sphincter of Oddi bears no relation to the gall bladder either anatomically or physiologically.

The capacity of the gall bladder is estimated by "Mayo" to be 1-40 to 1-50 of the liver secretion.

"Mann" thinks it is about  $\frac{1}{2}$  hours liver secretion.

Many observers believe its function to be rather of a safety valve in times of increased interductal pressure.

The bile in the gall bladder is found to be much more concentrated than that in the ducts. It is darker in color, of greater specific gravity and is found to contain, an addition of mucin and nucleo-albumin. Its exact function and importance to the organism is at this time very difficult to place.

The importance of bile in digestion is not sufficiently appreciated. In its absence only 1-7 to 1-2 of the normal quantity of fat is taken up.

"Claude Bernard" showed that bile without pancreatic juice does not permit of fat absorption. The fat splitting property of the pancreatic juice is intensified by the presence of bile acid salts. A few patients in whom bile has been diverted from the intestinal tract for a long time, have been reported doing well. This is only another demonstration that the organism finds ways and means to replace lost function.

The relation of the Sphincter of Vater to the physiology and pathology of the bile and associated infections of the gall bladder, liver and pancreas has attracted the attention of physiologists for years.

In 1681, "Glisson" first suggested the idea of a sphincter arrangement of the duodenal end of the common duct.

"Oddi" in 1887 describes the sphincter in dogs. He observed that it was separate from the muscle of the duodenum. He never tried to demonstrate it in man. He also observed

dilatation of the extra-hepatic ducts after cholecystectomy in dogs.

Hendrickson, 1898 and Kelly, 1899 confirmed Oddi's work and demonstrated the sphincter in man.

Archibald, in 1912-13 verified its function in maintaining intraductal pressure. He found that on section of the sphincter, that intraductal pressure fell from 650-70 mm. of water. His experiments led him to believe that if bile was forced into the pancreatic duct at a higher pressure than that obtained in the ducts normally, that pancreatitis would result.

Mann, after a study of the sphincter and the Ampulla of Vater in 170 autopsies found it possible to infect the pancreas from the common bile duct in only 4.5 per cent of patients. He estimates the pressure of biliary secretion at 350 mm. of bile, and that of the gall bladder contraction as rather uncertain, and far less than generally attributed to it, but probably around 300 mm. of bile. The diaphragm and abdominal muscles are very important agents in the maintenance of the bile flow and the biliary pressure.

The greatest intraductal pressure was obtained when the animal vomited, and the pressure was about 1000 mm. of bile.

He found that the injection of bile through the pancreatic duct at 500 mm. of bile produced no pathology, and that pancreatitis was only occasionally produced, where a pressure of a 1000 mm. of bile was applied. Ligation of the goat's common duct, below the pancreatic duct did not produce any symptoms in the animal; and no evidence of pancreatitis was seen at autopsy.

"Judd and Mann" showed a dilatation of the extra hepatic ducts after cholecystectomy. At first there was a contraction of the sphincter and later a relaxation or paralysis. Attempts have been made by numerous workers to determine the absolute sphincter pressure.

"Oddi and Archibald" found it to be between 650 to 675 mm. of water.

"Herring and Simpson" found it from 200 to 300 mm. of water. Mann showed it at 150 mm. of water.

While there is considerable variation in results obtained by the various observers, it is thought that the probable truth is about 150 mm. water.

The nervous control of the sphincter was first demonstrated by "Heidenhan 1861" by stimulating the cervical spinal cord. "Doyan 1893" found that stimulation of the peripheral ends of the splanchnic, shows contraction; and of the central ends inhibits function.

Later on "Courtade and Guyon" found that stimulation of the splanchnics caused the gall bladder to relax and stimulation of the vagus caused the gall bladder to contract and the sphincter of Oddi to relax.

#### Jaundice:

In obstruction to the common bile duct, there occurs a stasis in the bile channels, and as a result a rupture of the intra-cellular bile capillaries. The bile then passes through the lymph channels of the liver into the thoracic duct or blood capillaries.

"McMaster and Rous," have determined that the ducts from  $\frac{3}{4}$  of the liver substance can be obstructed before there is pigment or cholate accumulation; and that tissue icterus did occur when 19-20 of the liver substance was placed in stasis.

In the hemolytic or toxemic icterus, there is an increased blood destruction and consequently the bile becomes much thickened and especially rich in pigments. The ducts cannot be emptied by the usual secretory pressure of the liver. They become plugged with so-called "bile thrombi," and as a result the bile becomes dammed back; ruptures the bile capillaries and is forced into the lymphatic system. Thus, it is seen, that the difference between hematogenous, and obstructive jaundice, is not as great, as was formerly supposed.

Von den Burgh developed a chemical test to differentiate between obstructive, and non-obstructive jaundice. It is often very difficult to do this. With Ehrlich's diazo reagent, minute traces of bilirubin can be detected in the blood stream.

The bilirubin present in the blood serum differs in the two types of jaundice.

In the obstructive type it is free and uncombined, while, in the non-obstructive type it is bound to the albuminous material and liberated when alcohol is added.

#### Results of Icterus.

In obstruction of the common duct, there is observed a dilatation of all the bile passages, and as much as a "liter" of bile has been found in them.

The gall bladder in a large percentage of cases is found contracted in common duct obstruction from stone and dilated in common duct obstruction from cancer of the head of the pancreas, (Courvoisier's Law.)

McMaster, Brown and Rous found that the bile secreted in the presence of partial common duct obstruction contains considerably less cholates and cholesterol.

The changes in the liver following biliary obstruction is similar to that found in other



glands. For instance, the kidney. They propose the name "hydro-hepatosis" in order to indicate the principles in its development.

In another report on the intero-hepatic circulation of bile pigment, they summarize their findings as follows:

In dogs fed the green bile of the liver tissue of herbivora, the bile secreted later, frequently becomes green, changing from the previous yellow, brown. Where sheep bile containing cholehaematin is fed, the bile comes to contain this pigment. When dogs bile in quantity is given; a well marked increase in the output of bilirubin by the liver follows.

As a result of mechanical pressure and chemical action of the bile, the liver cells soon cease to secrete. Excretion of bile acids and glycogen accumulation decreases, and there is soon evidence of a severe cell injury. Connective tissue formation occurs. The parenchyma is destroyed, and the liver becomes shrunken and atrophic.

In ligation of the common duct, icterus appears in three days, but if the thoracic duct is also ligated, icterus is postponed for weeks.

The entrance of bile into the general circulation is felt by the entire organism. Its toxic action is probably due to cholic acid, which irritates the central end of the vagus with resulting slowing of the heart action, and subsequently paralysis of some of the medullary nuclei. Lately suspicion has been turned on the bile pigments as an underlying factor.

Conclusions—That the production of the bile depends on the liver function.

That most of the so-called liver stimulants are mental rather than hepatic in action.

That infection involves the integrity of the liver, gall bladder, bile ducts and pancreas as a whole, rather than as separate structures.

That obstruction to the bile ducts causes injury to the parenchymal cells of the liver in much the same manner as kidney cells are damaged in urinary obstruction.

That the function of the gall bladder and the purported results of chemical biliary messengers have not been sustained by clinical, physiological or animal experimentation.

That jaundice as a result of mechanical pressure involves a danger to the cells of the entire organism as well as the parenchymal cells of the liver.

That the position of the liver function in its relation to the body is of the most supreme importance

## OSTEOMYELITIS, DIAGNOSIS AND TREATMENT\*

J. HUTCHINGS WHITE, M. D.

MUSKOGEE

This condition should be considered under two divisions, i. e. diagnosis and treatment of the acute osteomyelitis, and the diagnosis and treatment of the chronic osteomyelitis.

The signs and symptoms of both forms of this crippling disease are well defined and unmistakable and the line of treatment is given in detail yet for some reason or other the failures in early diagnosis are many. There is no good reason why exploration of bone and medullary cavity should not be undertaken under the same aseptic condition as in cases of acute abdomen. Should one make the mistake of incising the periosteum and boring a hole in the bone, under aseptic conditions, the patient is invalidated for only a few days. Yet a few days delay in osteomyelitis may mean the loss of a leg or arm with months of disability or maybe a life. It is truly a disease upon which the entire profession agrees that there is one treatment only—surgery—and the method of doing this surgery is standardized. When presented a patient at or near the adolescent period of life who complains of severe pain in a long bone, more often the tibia, femur or humerus, temperature 103 to 105 with great prostration, one has a sufficient number of symptoms to make a diagnosis. There is nothing that gives the same signs and symptoms as an acute osteomyelitis. This condition is not like an appendicitis, gall stones, gastric ulcer, kidney colic or pelvic troubles in the female.

All of these diseases at times will abate and in the minds of the laity a patient recovers. Not so with an inflammation within unyielding bony walls. Infection of the marrow cavity results in formation of pus, the limits and the extent of damage of which are governed by the early diagnosis and the early surgery. If an early outlet is not procured the marrow is destroyed, the endosteum damaged, the bony shell is necrosed, the periosteum stripped from surface of the bone and the result is the loss of the diaphysis of long bones with possibility of multiple abscesses in other bones, pyemia or loss of life or what might be worse than loss of life, a state of chronic invalidism dependent upon the charities of others for maintaining a useless existence.

The symptoms of acute osteomyelitis are sudden local pains in the shaft of long bones,

\* Read before Section on Surgery and Gynecology, Annual Meeting Oklahoma State Medical Association, Oklahoma City, May 13, 14, 15, 1924.

generally near an extremity which is increased on percussion or by pressure. By palpating with a blunt instrument one will find a small place more sensitive than others which is usually the seat or center of trouble. A majority of these cases give a history of trauma.

Swelling is variable. It appears always after inflammatory products have passed through the bone and involved the soft structures. When inflammation is confined within marrow cavity no swelling is present.

Joints may be tender and swollen, but seldom does the inflammatory process involve the joint itself. When pus breaks through the epiphysis and invades the joint then it becomes necessary to open and drain the joint.

Fever, temperature 103 to 105, pulse 120-140, with much prostration. The patient looks, acts and is very ill.

It is not like a tubercular joint which begins rather insidiously—no high temperature nor prostration and does not begin in the diaphysis.

Acute articular rheumatism, multiple joint involvement and severity less marked. Other conditions, such as gonorrheal rheumatism, typhoid fever, osseous tuberculosis are actinomycosis are hardly worth considering if one takes the trouble to make a thorough examination of the patient.

The difficulty the surgeon has in this class of cases is the lateness in being referred. If physicians would camp on a case of serious illness and examine and re-examine a patient and not be content to call any pain in or around a joint, rheumatism, we would not see so many crippled children. I am not excusing myself or any one in the profession, who has overlooked a case of osteomyelitis. I have been guilty. Have you? I mean never to have it occur again. Will you say the same?. Better to be safe than sorry. Better to open a few medullary cavities and find no trouble than to overlook one when there is trouble.

In the chronic form of osteomyelitis there is oedema, redness and induration of neighboring muscles, subcutaneous tissue and skin. Numerous discharging sinuses communicating with dead bone. The sinuses are lined with unhealthy granulations and are of various sizes. The older the process the more dense the scar tissue, the limb is greatly increased in size. On passing a probe dead bone is easily detected. Frequent attacks of erysipelas develop in cases of long duration. Following cases of moderate severity localized abscesses may develop without sinuses communicating with the surface of the skin. Such abscesses may persist for years with no necrosis or bony enlargement. The enlargement in chronic

cases with necrosis is due to oedema of soft parts and formation of involucrum.

The X-ray is of much value in these chronic cases to determine the extent of involvement of shaft, progress of new bone formation and locating small abscesses. Also demonstrating small sequestra. A recent article by Phemister in Journal American Medical Association on silent abscesses in chronic osteomyelitis is very interesting.

In the acute stage of this disease the earlier the pus is evacuated the less damage and the quicker the recovery. This demands a free incision through the soft structures, opening the periosteum and securing drainage from the medullary cavity. If much pus is encountered on opening the bone the trephine opening should be enlarged so long as definite pus escapes from the marrow. The contents of the marrow cavity should not be curetted nor removed. The saving of any part of the endosteum means a saving of the internal surface of the bone. The epiphyseal line should not be disturbed if possible to avoid same. This is of more importance in children and particularly at the knee and shoulder and wrist. It is from these points that the growth of bone is greatest. Should there be an entire destruction of the shaft and the limb is splinted with another bone, as in the lower extremity, the early removal of the necrosed bone is advocated while the periosteum is plastic. The time for this operation is variable, say about eight weeks after acute infection has stopped. The periosteum should have produced a thin layer of new bone. At this stage the X-ray will show some decided thickening of the cortex. Microscopic examination of the periosteum will prove very satisfactory in determining new growth of bone. The extent of removal of shaft can be determined by condition of the periosteum, amount of granulation tissue and condition of the marrow. After removal of the dead bone the periosteum is brought together and stitched with catgut making flattened tube. When bones are not splinted, as in case of humerus, the necrosed shaft should not be removed before the involucrum has formed sufficiently to support the soft structures and prevent deformity. The shell formed by the periosteum should not be left too long. In the early stages this shell has power to repair centrally; later it has not, but a granulating discharge surface remains. One is aided by X-ray in determining time for removal of necrosed bone—approximately when the total diameter of involucrum equals one-half the normal shaft. About twelve weeks after acute infection.

The difficulty in securing good results in



chronic cases is due to lack of sufficient blood supply to form healthy tissue. After removal of necrosed bone one may resort to the use of biff which English surgeons claim to have proven very satisfactory. After cleansing cavity fill with this paste and close wound. Other pastes also hypochlorite solutions have been used in bone fistula. In those cases which cannot be closed an amount of bone should be removed to allow skin flap to be turned in from each side and entirely or sufficiently cover the raw surface and obliterate the cavity.

It may be necessary to transplant bone where there is no regeneration of the shaft. Flaps of bone, periosteum and skin may be used to fill defects.

The details of all these procedures would not enhance the purpose of this paper and sight of the chief point I wish to bring to your consideration might be lost. It is, I am sure, superfluous to emphasize to this body the importance of early diagnosis, but I may with impunity admonish you to take the trouble and make the opportunity to impress upon the general practitioner the necessity for early surgery in this class of cases.

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Marshall, British Medical Journal June 19, 1919,  
Phemister, Journal American Medical Association, Volume 82,  
No. 17.

*Doctor:  
See your  
County  
Secretary  
and pay  
your 1925  
dues  
NOW!*

#### RESOLUTION ON INDUSTRIAL INSURANCE\*

Resolved, by the Oklahoma State Hospital Association that the operation of the Oklahoma Workmen's Compensation Act, as it is being administered by the present State Industrial Commission, is unjust and unsatisfactory to the hospitals of the State of Oklahoma. Claims rendered for industrial hospitalization are greatly delayed before being disposed of by the Commission, when disposed of often represent an inadequate compensation for the service, and enforcement of the award, when made, is in many instances neglected by the Commission. The insurance law of the State does not exact of insurance carriers, operating in the State, sufficient guarantees of solvency to protect claimants under the Workmen's Compensation Act. The Industrial Commission is far behind with its work.

Be it further resolved, that the attention of the Governor is respectfully called to Section 7312 Compiled Statutes of Oklahoma, which provides "the Governor may remove any Commissioner for inefficiency, neglect of duty or misconduct in office" and the Governor is requested to consider the exercise of the authority thereby conferred with a view to establishing a more efficient personnel in the membership of the Commission, if the exigencies require.

Be it further resolved, that the Governor be respectfully requested to present to the Tenth Legislature a recommendation for an investigation by that body of the administration of the Commission and of the Insurance Department of the State with a view to such structural changes in the Workmen's Compensation Act and in the Insurance Law, as will place the entire work of the State Industrial Commission under the direction of a Chairman, who shall be designated by the Governor and who shall possess qualifications equal to those required by law for a District Judge; and as will require insurance carriers, operating under the Workmen's Compensation Act, to make a deposit with the State Treasurer of securities proportioned to the amount of risks assumed by them within the State.

Be it further resolved, that a copy of these resolutions be sent to the Governor of the State and to the presiding officer of each branch of the Tenth Legislature.

\*Oklahoma State Hospital Association Meeting, Tulsa, Oklahoma, Dec. 9, 1924.

# THE JOURNAL

OF THE

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DR. CLAUDE A. THOMPSON.....Editor-in-Chief  
308 Barnes Building, Muskogee, Okla.  
DR. P. P. NESBITT.....Associate Editor  
814 Surety Building, Muskogee, Okla.

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Local news of possible interest to the medical profession  
notes on removals, changes in address, deaths and weddings will  
be gratefully received.

Advertising of articles, drugs or compounds unapproved by the  
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### EDITORIAL

#### JANUARY—OUR MONTH OF GRACE

Again we call attention of our members to the necessity of prompt payment of dues for 1925 *early in January*—The month is italicized to stress its importance. Unless dues are received from the County Secretary, in his absence from the individual member directly, before February, all accrued benefits and privileges are null and void. Medical Defense, whether the case originates a day or months before lapse of actual membership, which is December 31st of each year, becomes inoperative and a total loss. We have repeatedly warned that omission of merely a few days in this respect has cost individual

members an inexcusably disproportionate sum, when they have been called upon to expend large sums for attorney's fees which otherwise would have been their due from the Association. Regardless of the members plight the rule that if he is not in good standing and remains so at all times, must be enforced, should his dues lapse and he then becomes subject of attack.

Another phase of this matter, and one which should be considered in all fairness, is the unnecessary work entailed upon unpaid, unappreciated county secretaries when they are forced to waste their time in unnecessary efforts to place their members in good standing. It should be the duty of every member to make prompt payment of his dues. Instead of the county secretary having to hunt the member up, harry him about and waste valuable time attending to the members business, the member should devote a few minutes of his own precious time to his own business and make everything as easy as possible, including himself, for all concerned. **SEE YOUR SECRETARY TODAY.**

#### LEGISLATIVE ACTIVITIES

Press dispatches announcing convening of the present Legislative Session indicate that many measures of interest to the medical profession of Oklahoma may be up for consideration if the suggestions of Governor Trapp are heeded. His first suggestion that a "Legislative Holiday be declared or executed by a brief session with enactment only of most urgently needed legislation will meet with the approval of every Oklahoman. His suggestion that the White Elephant of unadvised action, that ill considered child of waste, which was created only through hysteria and misinformation, the Darlington Institution for treatment of Narcotics, be abandoned, thereby placing its inmates, present and prospective, as mere adjuncts to some other fitted State institution, meets the approval of every thoughtful, informed physician. This entire farcical state of affairs was brought about by the activities of people who themselves should probably have an inquiry into their mental states, and by unduly heeding the scratchings of lurid journalism, so-called. It should be buried as soon as possible, but not forgotten by our future legislators, who may again be called upon to pass upon similarly ill advised measures. Abolition of the Boley institution for treatment of colored tuberculars should also be carefully gone into. If these inmates may be as well, (and they should have better care) cared for in similar institutions, common



sense indicates that a centralization of effort will be best for the tax payers, and the same good ends accomplished.

The proposition to consolidate at Pryor, two other state institutions maintained for the care of unfortunate children, seems to be based only on the soundest economic and common sense grounds. The greater number of these children brought together as is reasonably practicable and possible at once makes for more economy as well as efficiency in their care. The State already has too many second rate institutions scattered about each demanding a costly overhead in the way of administration and support, much of which could be avoided by business like concentration. This very concentration and centralization of effort will at once improve the state of each unfortunate inmate. Instead of wasting his money in frittering it away on scores of inefficient employees, the money may be applied where it properly belongs, to the relief of the person for whom it was appropriated and voted. The entire program has the JOURNAL'S best wishes for success.

#### THE STATE BOARD OF MEDICAL EXAMINERS

The Biennial Report of Dr. J. M. Byrum, Secretary, State Board of Medical Examiners makes interesting reading and concludes with recommendations which, for the benefit of the profession and State, should probably be adopted. The report shows the funds as practically exhausted, with a probable deficit of approximately \$500.00 at the end of the fiscal year. The report shows that 38 applicants were received by examination of recognized graduates; 85 by reciprocity; 6 by re-registration of Territorial License; 7 by duplication of lost or destroyed license. Ninety-one were endorsed for reciprocity to other states, leaving us an apparent gain of 45, which may or may not be the actual case. The recommendations deduced from the report are as follows:

The Secretary of the Board therefore, desires to recommend that the following subjects be covered in amendments to be offered in the coming session of the Legislature:

1. That the Board be made to consist of SEVEN members representing the various schools of medical practice instead of NINE as at present.

2. That the regular meetings of the Board be held every FOUR months instead of QUARTERLY as provided in the present law.

3. That the Board of Medical Examiners be given quasijudicial functions while sitting

in hearings for the purpose of revocation or suspension of license and that appeals therefrom be provided in the same manner as the procedure under which appeals are taken from the Corporation Commission or the Industrial Commission and reviewed by the Supreme Court of the State and that the Medical license stand revoked or suspended pending the final hearing by the Court.

4. That some special procedure be provided for the revocation or cancellation of the license of the physician who is serving a penalty on a felony or of any offence involving moral turpitude and that the court records be made prima facie evidence in such proceedings and that the license of the physician who is a fugitive from justice for such crimes may be revoked or cancelled upon evidence of guilt.

5. That the provisions of licensure by Reciprocity be extended and placed upon an individual basis of credentials of medical education and preparation rather than upon an exchange of compliments between State Boards and that the Board be given powers to recognize the licentiates of the National Board of Examiners when proper application is made and endorsements given by the National Board.

#### *Editorial Notes—Personal and General*

DR. J. H. SCOTT, Shawnee, has removed to El Reno.

DR. MARY E. RAY, Bartlesville, has removed to Denver, Colo.

DR. J. WORRALL HENRY, Oklahoma City, has removed and located at Shawnee.

DR. D. D. ROBERTS, Enid, has been elected President of the Enid Kiwanis Club.

DR. D. LONG, Duncan, recently attended a national public health conference at New Orleans.

DR. J. E. COCHRAN, Byars, has removed to Wynnewood, where he has established his practice.

DR. WALTER HARDY, Ardmore, addressed the Lions recently, on the recent advances in the medical sciences.

DR. F. L. WORMINGTON, Miami, had a Ford coupe stolen from in front of the Baptist Hospital in November.

DR. and MRS. L. C. VANCE, Ponca City, announce the arrival of a baby boy, Tex, on December 12, weight 9 1-2 lbs.

DR. C. LOY, Wilburton, has sold his practice there, and accepted an appointment with the U. S. Veterans Bureau at Dallas.

DR. C. A. THOMPSON, Muskogee, and Miss Jean Lancaster of Muskogee, were married December 12, 1924, at Waxahachie, Texas.

DR. G. GARABEDIAN, Tulsa, made an emergency call to Bartlesville, December 13, by airplane, making the trip in 33 minutes.

DR. CLAUDE E. PUTNAM, Tuttle, has accepted an appointment with the Department of the Interior, U. S. Indian Field Service at Tohatchi, New Mexico.

DR. J. E. CRAWFORD, Dewey, has removed to New Orleans, where he has accepted an appointment as resident surgeon at the Eye, Ear, Nose and Throat Hospital.

WAGONER COUNTY MEDICAL SOCIETY elected the following officers for 1925: Dr. T. J. Shinn, Wagoner, President, and Dr. C. E. Hayward, Wagoner, Secretary.

ALFALFA COUNTY MEDICAL SOCIETY officers of 1924 will hold over for the new year. They are Dr. J. W. Lynes, Byron, President, and Dr. H. A. Lile, Cherokee, Secretary.

CUSTER COUNTY MEDICAL SOCIETY met December 5, and elected the following officers for 1925: Dr. J. M. Gordon, Weatherford, President; Dr. J. J. Williams, Weatherford, Secretary-Treasurer.

COMANCHE COUNTY MEDICAL SOCIETY met at Lawton December 9 and selected officers for 1925: Dr. E. Brent Mitchell, President; Dr. L. C. Knee, Vice-President, and Dr. G. S. Barber, Secretary, all of Lawton.

TULSA COUNTY MEDICAL SOCIETY elected the following new officers for 1925: Dr. Horace T. Price, Tulsa, President; Dr. C. T. Hendershot, Tulsa, Vice-President; Dr. A. R. Wiley, Tulsa, Secretary; and Dr. C. S. Summers, Tulsa, President-elect.

GARFIELD COUNTY MEDICAL SOCIETY had annual election of officers for 1925 at Enid on December 13, and chose the following: Dr. A. E. Wilkins, Covington, President; Dr. Glenn Francisco, Enid, Vice-President; Dr. Paul Champlin, Enid, Secretary-Treasurer.

PONTOTOC COUNTY MEDICAL SOCIETY met and elected the following officers for 1925: Dr. S. L. Burns, Maxwell, President; Dr. M. M. Webster, Ada, Vice-President; Dr. L. Jeffress, Ada, Secretary-Treasurer; Dr. J. R. Craig, Ada, Censor; Dr. Catherine Brydia, Ada, Delegate, and Dr. M. C. McNew, Ada, Alternate.

CRAIG COUNTY MEDICAL SOCIETY met at Vinita December 9 and elected as 1925 officers the following: Dr. W. M. Campbell, Vinita, President; Dr. E. A. Pickens, Grove, Vice-President; Dr. J. L. Pierce, Vinita, 2nd Vice-President; Dr. P. L. Hays, Vinita, Secretary-Treasurer; Dr. F. M. Adams, Vinita, Censor; Dr. A. W. Heron, Vinita, Delegate, and Dr. W. R. Marks, Vinita, Alternate.

DR. L. C. NORTHUP, Tulsa was appointed county physician, for Tulsa County, succeeding Dr. V. K. Allen, whose term expired.

OTTAWA COUNTY MEDICAL SOCIETY held a "Better Acquainted Banquet" on December 17 at Dr. George DeTar's home at Miami.

DR. ARTHUR WILL, Oklahoma City, is confined to St. Anthony's Hospital with a broken arm, sustained by a fall on the ice, during the recent cold spell.

DR. MORRIS FISHBEIN, Chicago, who recently made several addresses in Oklahoma on public medical matters, has been appointed editor of the Journal of the AMA.

OKLAHOMA COUNTY recently adopted a full-time county health unit plan, providing for a corps of health officers, at a cost of \$8,500, which began to function January 1st.

COAL COUNTY MEDICAL SOCIETY elected new officers for 1925 as follows: Dr. J. J. Hipes, Coalgate, President, and Dr. Frank Bates, Coalgate, re-elected Secretary-Treasurer.

LATIMER COUNTY MEDICAL SOCIETY officers for 1925 are: Dr. R. L. Rich, Red Oak, President; Dr. E. B. Hamilton, Wilburton, Vice-President; Dr. T. L. Henry, Wilburton, Secretary-Treasurer.

PHYSICIANS AND SURGEONS HOSPITAL, Tulsa, filed suit recently against the Katy Railroad for \$1,773.85, the amount claimed to be due as hospital bills on two patients, sent to the hospital by the Company, said to have been hurt in a train wreck.

PITTSBURGH COUNTY MEDICAL SOCIETY held a banquet at the Episcopal Parish House, McAlester, December 16, at which the President-elect of the Oklahoma State Medical Association, Dr. P. P. Nesbitt, Muskogee, was the guest of honor.

PAYNE COUNTY MEDICAL SOCIETY will hold its next meeting at Cushing Wednesday, January 7, 1925, at 2:00 p. m.; Dr. Everett S. Lain, President of the State Association, will be on the program, which will include the annual election of officers for 1925.

OTTAWA COUNTY MEDICAL SOCIETY held its annual election of officers on December 3, which resulted as follows: Dr. George A. DeTar, Miami, President; Dr. L. W. Troutt, Afton, Dr. E. A. Aisenstadt, Picher, and Dr. G. O. Webb, Ardmore, Vice-Presidents; Dr. G. Pinnell, Miami, Secretary-Treasurer, and Dr. J. C. Jacobs, Miami, Censor.

CHOCTAW COUNTY MEDICAL SOCIETY, on December 3 met at Soper and elected the following new officers for 1925: Dr. K. P. Hampton, Soper, President; and Dr. E. A. Johnson, Hugo, Secretary. In connection with the meeting, a quail supper was served by Drs. Hampton, Wm. Yeargan and Sanders, and interesting papers by Drs. R. L. Gee, Hugo, and Dr. Hampton were read.



PITTSBURGH COUNTY MEDICAL SOCIETY met on December 5 at McAlester and elected the following officers for 1925: Dr. F. L. Watson, McAlester, President; Dr. A. D. Bunn, Savanna, Vice-President; Dr. L. S. Willour, McAlester, Secretary-Treasurer; Dr. J. F. Park, McAlester, and Dr. J. A. Munn, McAlester, Delegates; and Drs. R. K. Pemberton, O. W. Rice and J. C. Johnston, all of McAlester, Censors.

OKMULGEE COUNTY MEDICAL SOCIETY held its annual banquet and election of officers at Okmulgee December 6. The following were elected to serve in 1925: Dr. H. D. Boswell, Henryetta, President; Dr. W. W. Stark, Okmulgee, Vice-President; Dr. J. O. Lowe, Okmulgee, Secretary; Dr. W. C. Vernon, Okmulgee, Censor. Papers were presented by Dr. M. B. Glisman, Okmulgee, and Dr. Curt von Wedel, Oklahoma City.

OSAGE COUNTY MEDICAL SOCIETY met at the Municipal Hospital at Pawhuska, December 1, for the annual election of officers, with the following results: Dr. E. N. Lipe, Fairfax, President; Dr. W. H. Aaron, Pawhuska, Vice-President. Dr. Leonard C. Williams, Pawhuska, re-elected Secretary-Treasurer, and Dr. O. R. Gregg, Pawhuska, Censor. A banquet was served in connection with the meeting, and an address by Dr. Scheffler, Kansas City, was appreciated by those present.

SOUTHEASTERN OKLAHOMA MEDICAL ASSOCIATION held its annual meeting at Durant December 9, with visitors from Pittsburgh, Marshall, Choctaw, Coal and Johnston counties present. The meeting opened with an address by the President, Dr. J. I. Gaston, Madill. Interesting addresses were made by several doctors, including Dr. R. C. Gardner, Atoka; Dr. L. B. Clinton, Durant; Dr. D. C. Enloe, Sherman; Dr. D. E. Welborn, Kingston; and Dr. Walter Hardy, Ardmore.

MUSKOGEE COUNTY MEDICAL SOCIETY met December 8 at the Severs Hotel in annual meeting for the election of officers for 1925, with the following results: Dr. J. T. Nichols, President; Dr. H. A. Scott, Vice-President; Dr. A. L. Stocks, re-elected Secretary-Treasurer, and Dr. I. B. Oldham, Censor, 3 years; all of Muskogee. Papers were presented on Spastic Paraplegia, by Dr. R. N. Holcombe; Ataxic Paraplegia, Dr. F. L. Ewing; Loco-motor Ataxia, by Dr. J. N. Turner, and Amyotrophic Lateral Sclerosis, by Dr. H. T. Ballantyne.

OKLAHOMA COUNTY MEDICAL ASSOCIATION held its regular meeting on December 13, and the following were elected its new officers for the year 1925: Dr. H. Couiter Todd, Oklahoma City, President; Dr. W. W. Rucks, Oklahoma City, Vice-President; Dr. S. Ernest Strader, Oklahoma City, Secretary-Treasurer; Dr. LeRoy Long, Sr. Oklahoma City, member Board of Censors. The delegates and alternates to the State Association meeting are as follows: Dr. William H. Bailey, Dr. A. B. Chase, Dr. W. A. Lackey, Dr. C. E. Barker, Dr. W. L. Fowler, Dr. A. J. Sands, and Dr. R. D. Long; alternates: Dr. R. S. Love, Dr. H. Coulter Todd, Dr. Paul Crawford, Dr. J. H. Maxwell, Dr. Horace Reed, Dr. H. M. Williams, and Dr. D. D. McHenry.

### DOCTOR JOHN HENRY NOAH

Dr. J. H. Noah, DeNoya, Oklahoma, died at Vinita, Oklahoma November 24, 1924, from general paralysis, his health having been poor for several years. He is survived by his widow, Mrs. Ruth Noah, Cromwell, Oklahoma. Dr. Noah was a member of the Osage County Medical Society, and was born at San Antonio, Texas, November 5, 1882. He graduated in medicine at the College of physicians and Surgeons, Little Rock, Arkansas in 1911, and served with distinction as an officer in the Medical Corps during the World War.

### OBSTETRICS and PEDIATRICS

Edited by Carroll M. Pounders, M. D.  
532 Liberty National Building, Oklahoma City

### NEWER CLINICAL SIGNS OF EARLY RICKETS —C. Ulysess Moore, M. D., J. A. M. A., Nov. 1924.

The writer confines his discussion to the important skeletal signs. These, as a rule, show themselves in the head first, the thorax second and the extremities last. Craniotabes or cranial rickets most frequently occur during the first four months of life—during the period of most rapid growth of the head. This sign was found present in 60 per cent of the winter born babies on the Pacific Northwest coast. Associated with this is found prominent bosses and flattening of the posterior and postero-lateral portions of the head. As to the chest, the anterior portion may become noticeably softened during the first trimester. The most common deformities seen are (1) the square shaped chest, (2) the triangular chest and (3) the oval or flat chest—given in the order of their frequency. During the second four months this order is reversed. Enlargements of the epiphyses are rare during the first half of the first year. On walking bow-legs and knock-knees develop. Rickets of the extremities is always to be looked for following craniotabes and costomalacia. It is pointed out that there is a marked looseness of the lateral ligaments of the knee joint before either knock-knees or bow-legs have definitely developed. Much stress is put on this lateral mobility of the knee joint as a valuable point for both diagnosis and prognosis. A "knee motility board" is described for holding the thigh in a firm position while this mobility is tested.

### ULTRAVIOLET RAY THERAPY IN PERITONEAL AND GLANDULAR TUBERCULOSIS OF CHILDREN—H. J. Gersterberger, M. D. and S. A. Wahl, M. D., J. A. M. A., Nov. 1924.

The authors found tuberculosis of the peritoneum and mesenteric glands especially benefitted by treatment. As these types have always responded to different therapeutic measures more favorably than most other types, it is probable that there is some special advantage or characteristic of the lymphatic system of this part of the body. However, the results from light therapy are found to

be much better than those obtained by rest in bed, laparotomy or soap inunctions. Within two weeks the temperature drops, and the patient feels and seems better. Usually in about six weeks the temperature has reached normal and there is marked improvement in the physical condition. Even in a patient who remained at home under poor hygienic surroundings and was not confined to bed, the improvement was remarkable. The enlarged bronchial glands were distinctly reduced, as shown by the gradual disappearance of the annoying paroxysmal coughing attacks. The peripheral lymph nodes were reduced, but not to such an extent as were the mesenteric and mediastinal glands. Two cases of bone tuberculosis responded well. Three cases of pulmonary tuberculosis of the miliary type were not influenced by the treatment.

**NONRACHITIC SOFTENING OF THE RIBS IN INFANTS AND CHILDREN**—Alfred E. Hess, M. D., *American Journal of Disease of Children*. Nov. 1924.

His investigations have led the writer to conclude that softness of the ribs and of the anterior chest wall is not necessarily a sign of rickets, although it may be brought about or intensified by this disorder. His investigations were very thorough. In addition to noting the purely clinical signs, the epiphyses of the wrists were radiographed and the inorganic phosphates of the blood estimated. The therapeutic effects of the ordinary antirachitic treatments were also tried out. Cod liver oil, yolk of egg or a combination of both or irradiation with sunlight or with the carbon arc light were used. Autolyzed yeast was given to determine whether or not the trouble might be due to a lack of the water soluble vitamin. Iron was tried in the form of saccharated carbonate and calcium as calcium lactate. The softening was not influenced by any of these agencies, even when carried out as long as a year. The condition was quite definitely proven to be not associated with rickets in a great many cases. It is associated preeminently with the atrophic in contra-distinction to the well nourished infant. As is well known, rickets is frequently met with in babies who are overweight and robust. This softening is found frequently in the new-born, especially those born prematurely, and may persist for years.

**ORTHOPAEDIC SURGERY**

Edited by Earl D. McBride, M. D.

1006 First Nat'l. Bank Bldg. Oklahoma City

**REPORT OF ORTHOPEDIC CLINICS AT THE AMERICAN COLLEGE OF SURGEONS**—New York, 1924.

The outstanding feature of this meeting was the thesis of Drs. N. D. Royle and John I. Hunter, of Sydney, Australia, who described in detail their new operation of sympathectomy for spastic paralysis.

Drs. Royle and Hunter are two young men in their early forties. They demonstrated conclusively that they had worked out all of the details with the utmost precision and made no claims or statements which they could not demonstrate by experiments and clinical experience.

The object of their operation is to remove the spasticity of the affected muscles by destroying the connection between the sympathetic ganglion and the motor nerve trunks. This they do by intercepting the communicating rami at the point of entrance to the nerve trunk near the vertebral foramen. They lay special emphasis upon the term *plastitone*, which they claim is demonstrated in a practical way by exciting the patellar reflex rapidly and constantly until there is a maximum of contraction of the quadriceps, which raises the heel off the table and when the irritation is discontinued the heel slowly relaxes again to the table. If the heel quickly falls to the table then there is a lack of plastic tone and the case is not suitable for sympathectomy.

The operation is employed in adults as well as children but their experiments and their cases, of which they reported some seventy odd in number, seem to be limited mostly to children and to the common form of cerebral spastic paralysis. Moving pictures were shown before and after operation of many of these cases and the results appeared very spectacular.

For the lower limbs, an incision is made in the lumbar region, external to the heavy lumbar muscles, and by dissection extra peritoneally, the vertebra are reached and the sympathetic nerve trunk exposed in the region from the twelfth dorsal to the first lumbar vertebra. The little threads of communicating rami are picked up by a probe, which is bent like a hook and literally torn from their attachment. These small nerve branches are somewhat difficult to detect from fibrous tissues but to see Dr. Royle do this operation on the live patient as well as the cadaver, one is lead to feel that it is not by any means an impractical procedure for anyone capable of doing surgery.

For the arm an incision is made about one inch above the clavicle and working posteriorly to the jugular vein the scalenae muscles are exposed and in this region the cervical nerve trunks come into view. Here again the communicating rami are torn from their attachment from the nerves composing the cervical plexus. The wounds are closed and the patient placed in bed without any special appliances.

Dr. Alfred W. Adson of Rochester, Minn., and Dr. Allen B. Knavel of Chicago, reported about twelve or fourteen cases each which they had done in a similar manner to that described by Dr. Royle and they seemed to look with dissatisfaction upon their results. However, they reported that they had removed the ganglion as well as the rami, and Dr. Hunter, who is the neurologist, explained that this was not the correct procedure, and also demonstrated that they had not selected their cases in the regard to the amount of plastic tone which is a first essential in selecting a case. Dr. Royle did two operations at the Hospital for Ruptured and Crippled in New York, one a cervical, the other a lumbar and the writer saw these cases the next day with Dr. Royal Whitman, attending surgeon of this hospital and Dr. Whitman who carefully examined the cases previous to operation, thought that there was some improvement in the brief period of twelve hours.

Dr. Royle points out very clearly that even after doing the sympathectomy the habits of the patient cannot be changed for many weeks, and states that it is absolutely necessary to follow the operation with muscle re-education and physiotherapy



treatment. Also he insists that all permanent contractures of tendons be relieved before the operation is performed.

### EYE, EAR, NOSE and THROAT

Edited by Jas. C. Braswell, M. D.

726 Mayo Bldg., Tulsa

**THE CAUSES AND TREATMENT OF OTITIS MEDIA**—1. Observations on 205 cases occurring in 613 consecutive hospital admissions. Smith, D. T.: *Am. J. Dis. Child.*, 1924, xxviii, 1.

Of 613 patients admitted to the hospital, 33.4 per cent had otitis media when they came in or developed it while they were in the hospital.

The race and sex of the patient seemed to have no relation to the incidence of the disease.

A definite seasonal variation was noted. In February the incidence was 47.3 per cent and in July only 23 per cent.

The most susceptible period was between the ages of three and 15 months. Of the children in this group more than 50 per cent had otitis media.

Fifty per cent or more of the patients with pneumonia, dysentery, nasal diphtheria, pertussis and pyelitis developed otitis media. In those with prematurity, nephritis, and the non-infectious diseases the incidence of ear infections was less than 21 per cent.

Haemolytic streptococci were isolated from the aural discharge in 56 per cent of the fifty cases in which cultures were made.

The average duration of the disease in 100 cases was twenty five and one-half days.

In commenting on the marked susceptibility of the babies between 3 and 15 months of age, the author suggests that vitamin deficiency may play a role in lowering the resistance as practically all of the children studied in the series were on artificial feedings and most of them had received little, if any cod liver oil before their admission to the hospital.

Smith also noted that 60 per cent of the thirty patients with rickets had otitis media, and that the age period at which the susceptibility is greatest corresponds rather closely to that of rickets and scurvy.

Twenty cases of chronic otitis were cured by local chemotherapy in an average of seven days each, and sixty cases of acute otitis media were cured in an average of thirteen days each.

Mastoiditis did not occur in any of the eighty-eight consecutive cases treated by local chemotherapy, but in 4 per cent of the controls a mastoid operation was necessary.

**THE APPLICATION OF IMMUNOLOGY TO OPHTHALMOLOGY**—Woods, A. C.: *Arch. Ophth.* 1924, liii, 321.

The author discusses in a general way his ideas concerning the various diseases of the eye which may be explained on the basis of anaphylaxis or allergy. He takes up four structures of the eye, the conjunctiva, cornea, lens and uvea.

Inflammations of the conjunctiva which seem to belong to this category are those occurring in hay fever, those associated with pollen hypersensitivity, those due to food anaphylaxis and those due to phlyctenular disease. Woods quotes various

investigators who have done considerable work on each of these subjects and gives his own theory of the anaphylactic relation between tuberculosis and phlyctenular disease.

With regard to the cornea he is inclined to agree with those who claim that interstitial keratitis, of leucetic or other origin is frequently allergic.

A considerable amount of work has been done on the lens by European and American investigators, but many of the reports are inconclusive and the serological explanation of the results is often very complicated.

In Wood's opinion uveal tract diseases as sympathetic ophthalmia and "rheumatic" uveitis may often be explained on the basis of anaphylaxis.

The method of arriving at a diagnosis with the use of pollen, tuberculin, lens protein and uveal pigment are described in detail.

**SOME CONCLUSIONS AS TO CATARACT EXTRACTION**—Meding, C. B.: *Cincinnati, M. J.* 1924, v, 177.

The method used has little relation to the end results because of: (1) the wide range in the skill and fitness of operators, (2) the great variation in the physical, mental and racial characteristics of patients, (3) the relation of the method of operation to the experience of the operator.

Unless the cause of a condition is known, it cannot be known whether relief will be given by any given method of treatment such as prolapse of the iris by iridectomy, intracapsular or extracapsular lens extraction, routine preparation to prevent infection, or routine postoperative management.

The treatment must be adapted to the requirements of the particular case.

The authors choice of operation is an intracapsular extraction in which the ligament is ruptured from within by means of his modified Kalt forceps with two small balls on their tips. These forceps are introduced closed in the same manner as the original forceps. The position of the balls can be determined from the bulge of the iris. With the forceps grasping the globe, definite pressure is made to bring the ligament forward and the forceps are then opened and closed to rub the zonula from about 4 to 8 o'clock. If the lens is not dislocated the forceps are used again. Two advantages of this operation are that it will do no harm if it fails and the iridectomy follows the dislocation.

**RETROBULBAR AND INTRA-OCULAR NEURITIS DUE TO HYPERPLASTIC CHANGES IN THE ETHMO-SPHENOID SINUSES**—Sutherland, J. M.: *J. Michigan State M. Soc.*, xxxiii, 279.

Sutherland calls attention to the relation of the posterior ethmoid cells and sphenoid sinus to the optic nerve, the intimate relationship of the blood vessels supplying the sinuses and the orbit, the blood supply of the optic nerve, and the size of the optic foramen and canal. Etiological factors of retrobulbar and intra-ocular neuritis are infection through the blood and lymph streams, direct extension of inflammation or infection and pressure upon the intracanalicular portion of the optic nerve from thickening of the bone due to periosteitis, osteitis, or oedema of the soft tissues.

The author has proved to his own satisfaction

that any chronic irritation of the posterior ethmoid cell or sphenoid sinus, with or without supuration and bony changes is sufficient to cause involvement of the optic nerve. He advocates for all cases of optic neuritis, and especially unilateral cases, opening and drainage of the ethmo-sphenoidal sinuses even though the rhinoscopic examination may be negative.

### **BACTERIOLOGY and PATHOLOGY**

Edited by Wm. H. Bailey, A.B., M.D.

Wesley Hospital, Oklahoma City

**THE PLACE OF PATHOLOGY IN MEDICAL SCIENCES—Dr. W. G. MacCallum, Baltimore, Md., Southern Med. Jr., Nov. 1924.**

The author calls attention to the fact that the Southern Medical Association has been formed 17 years and only now is forming a Section on Pathology. He says that of course much of the discussion in the other Sections has dealt with Pathology but he rejoices in the fact that now there will be a place in which studies of pathological conditions will constitute the prime interest. He emphasizes the importance of laboratory studies to the practicing clinician and the value of autopsies in assisting him in visualizing the conditions diagnosed. He states that the great clinicians have been primarily good pathological anatomists. He places pathology in a central position between biology, anatomy, physiology, chemistry and physics on the one hand and all the branches of medicine and surgery on the other. He criticizes the extreme reliances placed by some clinicians on X-ray and other laboratory reports. An intimate knowledge of the possibilities and probabilities of the morbid anatomical changes going on is absolutely necessary to be able to attain a reasonable clinical diagnosis. This is as true for the surgeon as for the medical man. This can only be attained thru long continued studies of autopsies and the microscopic nature of the conditions found. He gives us as his opinion that no one can become a really good clinician in any specialty until he has spent a long apprenticeship in studying the morbid processes that take place in his chosen field and so establish a foundation on which to ground the clinical observations that he makes when examining his patients. W. H. B.

**INCIDENCE OF SPIROCHAETA PALLIDA IN CEREBROSPINAL FLUID DURING EARLY STAGE OF SYPHILIS—Alan M. Chesney, M. D. and Jarold E. Kemp, M. D., A. M. A., Journal. Nov. 29, 1924.**

It is now universally admitted that the causative agent of syphilis may invade the central nervous system during the early stage of the disease at the time of the general dissemination of the organism.

The spinal fluids of 34 patients with untreated syphilis were inoculated into rabbits. In each case the spinal fluid was normal as regards cell count, globulin, Wassermann reaction and mastic curve. Each patient showed one or more of the clinical signs of secondary syphilis, and in all of them, there was a positive blood Wassermann reaction. In none was there any objective evidence of involvement of the central nervous system. The duration of the infection as far as could be

determined by histories, varied from three weeks to six months. The duration of the secondary manifestations varied from one day to ten weeks.

Positive inoculations were obtained with five of the thirty four fluids. In three instances, these were obtained in rabbits inoculated in the first series. The other two were obtained in the sub-inoculations. The incubation period with the first three rabbits was 49, 60 and 64 days, respectively. It is conceivable that a slightly higher percentage of positive results might have been obtained had the original animals been observed for a longer period than ninety days.

The evidence of dissemination produced by four of these strains and the production of keratitis by one of them also supports the view that these organisms were in reality representatives of *Spirochaeta pallida*.

The occurrence of *Spirochaeta pallida* in the spinal fluid of patients with early syphilis in from 14.7 to 26.6 per cent of the cases, when the spinal fluid is otherwise apparently normal, is rather striking. It indicates that one is not justified in concluding that a normal spinal fluid in such cases is free from virulent spirochetes. M. W.

**REINFECTION IN SYPHILIS—James Russell Driver, M. D., Cleveland, A. M. A. Journal, Nov. 29, 1924.**

The following conditions are deemed necessary for a diagnosis of reinfection of syphilis.

1. In the first attack, *Spirochaeta pallida* must have been found from the syphilitic lesion, that is, the chancre, condyloma, mucous patch, lymph node puncture or rash, or from a positive Wassermann on the blood.

2. In the second attack, *Spirochaeta pallida* must be demonstrated from the new chancre, which appeared at a different site from the first chancre; the blood at the same time giving a negative Wassermann reaction.

It is seen then, therefore that in differential diagnosis, if the dark field is positive and the Wassermann reaction is negative, all possibilities excepting reinfection are at once eliminated.

Study of a group of thirteen cases of reinfection seen among approximately 5,000 syphilitic patients shows the striking fact that these figures agree closely with those of White, who reported twenty-eight instances among 10,500 cases.

With the exception of one case, all the group of reinfections were patients diagnosed while in the primary, or perhaps better still, the early stage of the disease. The average patient received treatment consisting of from six to twenty-four injections of arsphenamin, with a median of twelve injections, and from fifteen to fifty injections of mercuric salicylate, with a median of twenty five injections, to cure him.

The thirteen cases of reinfection reported satisfy quite closely the requirements laid down to constitute a true infection.

The curability of syphilis is believed to be provided (a) an early diagnosis can be made by the dark field, and (b) vigorous treatment can be instituted with arsphenamin and mercury injections.

With modern therapy, syphilitic reinfection is probably more frequent than we suspect, and if more patients with syphilis could be closely followed over a period of years, such would be found to be the case. M. W.



**THE INFLUENCE OF THE NATURAL ANTI-SHEEP HEMOLYSINS OF HUMAN SERA UPON THE PRODUCTION OF ANOMALOUS REACTIONS IN THE FIRST TUBE OF KOLMER'S TEST FOR SYPHILIS**—Robert A. Kilduffe, A. B., A. M., Los Angeles, California. *The Journal of Laboratory and Clinical Medicine*, Nov. 1924.

It has been observed that in graduated doses of test for syphilis, 0.05 c. c. of serum may sometimes show greater fixation than 0.1 c. c. The natural assumption is to ascribe this type of reaction to the presence of natural anti-sheep hemolysins in the serum tested. But such anomalous reactions may occur in the absence of natural hemolysin in the serum tested and are, therefore, occasionally due to the presence of serum constituents whose nature and mode of action are as yet, unknown.

In a definite proportion of anomalously reacting sera the reaction is due to the presence of relatively large amounts of natural anti-sheep hemolysin.

The anomalous reactions in the first tube of Kolmer's quantitative test may occur after the absorption of the natural anti-sheep amboceptor, and absorption of hemolysin from hemolysin-containing sera may be without effect upon the anomalous reaction.

In a definite proportion of hemolysin-containing and anomalously-reacting sera while the strength of the reaction in the first tube may be increased in the first tube by the absorption of the natural anti-sheep hemolysin, the ultimate dilution in which the serum reacts after absorption may be affected and decreased.

In Kolmer's quantitative method these anomalous reactions are of no practical importance and do not necessitate prior absorption of the sera, as the strength of the reaction is not materially affected by the anomalous reactions occurring in the first tube.

Unknown serum constituents, not removable by exposure to sheep cells and capable of causing hemolysis, are a potential, though infrequent, source of error in the production of false negative reactions when only a single dose of 0.1 c. c. of serum in tested in complement-fixation methods for syphilis. E. W.

**A STUDY OF THE SPECIFICITY OF THE KOLMER COMPLEMENT-FIXATION TEST FOR SYPHILIS**—John A. Kolmer, M. D., D. Sc., and Edward Steinfield, M. D. *The Journal of Laboratory and Clinical Medicine*. Oct. 1924.

The complement-fixation test for syphilis serves its most useful purpose in the diagnosis of syphilis in clinically latent and tertiary stages, as a guide in treatment and as evidence of cure, also in atypical cases and in confirmation of diagnosis.

The usefulness of the test is measured by the degree of sensitiveness as consistent with specificity to render its best service as aid in diagnosis, as a guide in treatment and a criterion of cure.

Falsely negative complement-fixation reactions may occur in cases of extremely latent syphilis because of insufficient amounts of "reagin" in the blood and spinal fluid. The incidence of these may be reduced to as maximum a degree of sensitiveness as is consistent with specificity.

Falsely positive reactions are usually due to error in technic and can be reduced to a minimum by confining the conduct of the comple-

ment-fixation test for syphilis to competent serologists who are unwilling to sacrifice accuracy for mere speed in returning reports or for economy of time and materials.

The new complement-fixation test does not yield falsely positive reactions with the sera of rats, guinea pigs and rabbits with acute and chronic trypanosomiasis.

The new complement-fixation test for syphilis does not appear to yield falsely positive reactions with the sera of nonsyphilitic lepers or with the sera of nonsyphilitic individuals with acute and chronic tuberculosis, acute and chronic malaria, in advanced pregnancy, advanced diabetes, advanced nephritis, acute pneumonia, acute scarlet fever or with jaundice due to nonsyphilitic involvement of the liver and its bile ducts. E. W.

## TUBERCULOSIS

Edited by L. J. Moorman, M. D.

611 1st Nat'l. Bank Bldg., Oklahoma City

**A PLEA AGAINST THE INDISCRIMINATE USE OF ARTIFICIAL PNEUMOTHORAX IN THE TREATMENT OF PULMONARY TUBERCULOSIS**—Harry Golembe. *The American Review of Tuberculosis*. June 1924.

Indiscriminate use of artificial pneumothorax serves only to discredit the treatment with both the medical and the general public. Haphazard use of the treatment is too general, depriving many suitable cases of their best chances for recovery and subjecting many unsuitable ones to needless painful and expensive treatment.

This procedure should be used only by men who are not only thoroughly trained but who are able to keep their patients under control for long periods. It should not be used in private practice unless the patient thoroughly understands what he is undertaking and is in a financial condition to carry it out.

Frequent fluoroscopic examinations are essential in the control of these cases even to well trained men. If pneumothorax is resorted to in an emergency such as hemoptysis it should be continued unless the patient is distinctly unsuitable for it. Its use in unsuitable cases except in such emergencies is strongly condemned. It should be attempted if indicated even though the patient has a history of its use. Treatment should not be stopped because of hemoptysis or pleural effusion occurring during its course. The only cases of pleural effusion in which it is safe to stop the treatment are those in which the pleural space is rapidly obliterated.

**COMPLETE LEFT HEMIPLEGIA, WITH RECOVERY, AFTER ATTEMPTED ARTIFICIAL PNEUMOTHORAX**—Saling Somon. *The American Review of Tuberculosis*. June 1924.

Accidents following artificial pneumothorax seem to be reported more fully in foreign than in American literature. It is impossible to determine whether they do not occur so frequently or whether American physicians do not report their cases.

Cordier classified these accidents according to the symptoms occurring into three groups. "(1) Those in which the symptoms develop suddenly, resemble syncope and frequently terminate in rapid death, (2) in which convulsions and epi-

leptiform seizures are the initial symptoms, (3) in which hemiplegia and paralysis occur. These may or may not be preceded by a convulsive seizure or by syncope, the motor disturbance usually lasts but a short time and the paralysis may occur either on the same or opposite side of the pleura punctured."

Many explanations are offered for the occurrence of these symptoms but the majority of authorities consider that they are due either to a pleural reflex or shock, or to air emboli lodging in the cerebral blood vessels.

The author reports one case which appears to come under Cordeirs group 3. The needle was inserted with the usual technique for the twelfth refill but no manometric oscillations being obtained after three minutes, it was withdrawn and reinserted at a near point with no oscillations. The patient suddenly became unconscious in about one half minute and developed a slight convulsion. The needle was withdrawn and restorative measures applied although the patient maintained normal facial color, there was no cessation of breathing and the pulse remained of fair quality. A complete paralysis of the left side developed in three or four minutes with the eyes deviated to the right. The pupils were dilated during the attack and there was no increase of deep reflexes on the paralyzed side. The patient regained consciousness in about twenty minutes and the paralysis disappeared in about an hour. The attack was followed by a violent headache over the right eye and vomiting attacks. The artificial pneumothorax was discontinued and the patient was ambulant and improving at the time of reporting.

The author was unable to decide whether this was a case of an evanescent air embolism or of hysteria.

**CONTROLLED DIAPHRAGMATIC BREATHING IN THE TREATMENT OF PULMONARY TUBERCULOSIS**—S. Adolphus Knoff. *The American Review of Tuberculosis*, June 1924.

While there are very few contraindications to this method it is not suitable for terminal cases, cases in which the lower lobes are involved, or in those having pleuritic adhesions to the diaphragm or pleuritic, intestinal or peritoneal involvements which make it painful, or for cases in which it increases the cough. It will often help even third stage cases however, by relieving distressing symptoms.

It is useless only with those patients who are too lazy or too indifferent or who are unwilling to co-operate with the physician sufficiently to use it. It is absolutely necessary that the patient understand the method thoroughly, have complete confidence in his physician and co-operate fully with him. The patient should be carefully taught not only how to carry out the treatment but that it cannot produce hemorrhages or other harmful results, and that while it may not show immediate results it will eventually be of great benefit and is something he can do to further his recovery. He should also be taught to drink plenty of water, and to sleep and rest on the affected side as much as possible. This treatment will be found helpful in many cases unsuitable for artificial pneumothorax.

The patient should be thoroughly relaxed in bed or on a reclining chair in a semi-reclining position with the feet extended and slightly separated while

being taught the method. "He is then told to imagine that the respiratory movement begins in the toes of the right foot, the inhalation gradually traveling upward as far as the diaphragm on the right side then crossing over to the left side and gradually descending during exhalation to the left foot. While, of course, this breathing upward from the toes to the abdomen is merely imaginary, it results in a diaphragmatic breathing, and whatever quantity of air is inhaled passes mainly thru the lower portions of the lungs while the upper portions, where the tuberculous lesions are usually located, are put, if not at complete, at least at comparative rest. The patient should also be taught to pause a second or two after both inhalation and expiration, and to practice shallow breathing when not doing diaphragmatic breathing. He should be told to take a deep breath whenever he feels the need for it, but to practice diaphragmatic breathing for as long periods as possible until it becomes automatic.

Respirations may be easily reduced in his way to eight or ten per minute with no discomfort and with great benefit.

### BOOK REVIEWS

**A LABORATORY GUIDE IN HISTOLOGY**, (Second Edition, Revised), by Leslie B. Arey, Ph. D., Professor of Anatomy in the Northwestern University Medical School, Chicago. Second Edition, Revised. 12mo of 96 pages. Philadelphia and London: W. B. Saunders Company, 1924. Cloth, \$1.25 net.

A very handy guide for reference in studying the subject. The Author has divided this subject under three headings, a, Cytology, b, Histology, and c, Microscopic anatomy of organs. Under Cytology he briefly outlines The resting cell, Amitosis, and Mitosis. Under Cytology he briefly outlines the different Epitheliae, connective tissues, Cartilage, Bone, Blood, and Bone Marrow, and the different types of Muscular tissues. Under the Microscopic Anatomy of Organs he takes them up first according to the different systems, and subheads this into the respective organs in that system. It is thot to be an excellent guide on the subject, very concise, and clear.

**A TEXT-BOOK OF PATHOLOGY**, (Third Edition), by William G. MacCallum, M. D., Professor of Pathology and Bacteriology. Johns Hopkins University, Third edition, Thoroughly revised. Octavo volume of 1162 pages with 575 original illustrations. Philadelphia and London: W. B. Saunders Company, 1924. Cloth, \$10.00 net.

This the third edition of the text book of Pathology, edited by a man of unquestionable authority is welcomed by the profession everywhere. The Author states in the Preface that during the four years since this subject was last revised that much light has come forward on hitherto unknown subjects, for example, Rickets. Also the way has been



thrown open by the discovery of Insulin for a new Comprehension of Diabetes, and metabolism in general. He states that we are much more informed about Epidemic Encephalitis, Typhus, etc. Unfortunately not much additional information is added to tumors, and infections.

This is a masterpiece of medical literature, and should be studied, referred to, and read by every man in the profession, whether he be general practitioner, or specialist.

## A CLINICAL TOUR TO FOREIGN COUNTRIES FOR AMERICAN PHYSICIANS

Information pertaining to the Inter-State Post Graduate Assembly clinic tour of American physicians to Canada, British Isles and France, 1925, with extension tours to the leading medical centers of Europe. Under the direction of the Managing-Director's office of the Inter-State Post Graduate Assembly of America, Freeport, Illinois.

### ANNOUNCEMENT

The clinics and demonstrations connected with this tour will include all the different branches and specialties of medical science. Every branch of medicine receives the same consideration on the program. This announcement does not in any way represent the complete program of the tour, therefore, if you do not find the branch of medicine in which you are interested, represented in this report, you can rest assured that it will receive its proper importance on the program.

#### MAY 17

Tour starts from Chicago by special trains. Physicians living in territory where it will be more convenient to go direct to Toronto will be provided with transportation direct to this city in time for the clinics beginning May 13.

#### MAY 18, 19—TORONTO

We spend May 18 and 19 as the guest of the teaching staff of the Toronto University, Faculty of Medicine. Special clinics will be arranged covering the different branches of medical science by this Institution.

#### MAY 20

Trip through the Thousand Islands and the St. Lawrence Rapids.

#### MAY 21, 22—MONTREAL

We spend May 21 and 22 as the guest of the teaching staff of the McGill University, Faculty of Medicine. The clinics in Montreal are in charge of this Institution. Those who wish to join the tour at Montreal on the evening of May 22, receive a reduction of \$110.00 from the price of the tour.

#### MAY 23

Early A. M. sail for Liverpool, arriving in that city May 31st.

### SHIP PROGRAM

An intensive professional trans-Atlantic program for the benefit of the physicians who are taking advantage of the tour will take place on board ship and will be contributed to by some of America's most distinguished physicians and surgeons.

### JUNE 1 to 7—LONDON

June 1 to 7, the time is spent in London. The clinic arrangements in this city are under the direction of the Honorary Organizer, Mr. Philip Franklin, Honorary Secretary of the Laryngological section of the Royal Society of Medicine and Medical Director of the American Hospital, London; Sir Humphry Rolleston, Bt.; Sir John Bland Sutton, President of the Royal College of Surgeons; Sir William Arbuthnot Lane, Bt.; Sir St. Clair Thompson, President of the Royal Society of Medicine; Sir William Hale White, Retiring President of the Royal Society of Medicine; Mr. H. I. Waring, Vice-Chancellor of the University of London and Mr. W. Girling Ball.

Special social features of the London program will include the conferring of the honorary membership of the Association upon H. R. H. Duke of York at the opening ceremony, which will be held at Barnes Hall, Royal Society of Medicine and the conferring of Honorary Memberships upon the Prime Minister, the Rt. Hon. Stanley Baldwin; the Minister of Foreign Affairs, Rt. Hon. Austen Chamberlain; the Minister of Health, Rt. Hon. Neville Chamberlain; Sir Auckland Geddes; the American Ambassador; the Lord Mayor of London, Sir Humphry Rolleston, Bt., President of the Royal College of Physicians; Sir John Bland Sutton, President of the Royal College of Surgeons and Sir St. Clair Thompson, President of Royal Society of Medicine.

Receptions and luncheons will be given by the Lord Mayor of London, the Presidents of the Royal Societies of Medicine and Surgery, the English-Speaking Union, the Pilgrim's Society, American Chamber of Commerce and members of the British Government.

Intensive professional programs will be carried on at all the leading hospitals of London and at the headquarters of the Association, which will be at the home of the Royal College of Medicine, 1 Wimpole Street.

### JUNE 8, 9, 10—LIVERPOOL, MANCHESTER, LEEDS

At Liverpool, the physicians will be the guests of the staffs of all the large hospitals of that city under the direction of Sir Robert Jones, R. E. Kelly and colleagues. Clinic arrangements are now in formation.

At Manchester, the clinic group will be the guests of the staff of the Royal Infirmary. Sir William Milligan and associates are arranging the clinics.

At Leeds, the physicians will be the guests of the University of Leeds. Clinic arrangements are in charge of Sir Berkeley Moynihan and associates.

### JUNE 11, 12—DUBLIN

The American physicians will travel to Dublin, where arrangements are under the general management of Sir William DeCourcy Wheeler, Sir William Taylor, Sir Arthur Ball, Sir Robert Woods and their colleagues. All the Irish members of the Association of Surgeons of Great Britain and Ireland will co-operate in forming the program for the American physicians.

### JUNE 13, 14, 15—BELFAST

From Dublin the physicians go to Belfast. Here they are the guests of the teaching staff of Queen's University.

In presenting the clinics and demonstrations the teaching staff of Queen's University will be associated with that of the Royal Victoria Hospital.

#### JUNE 16, 17—GLASGOW

From Belfast we continue to Glasgow, where the clinics are now being arranged by Mr. Farquhar Macrae, Mr. J. H. Pringle, Dr. Findlay Cowan and Dr. John Patrick and their colleagues. On these dates excursions will be run to Ayr for families of the doctors and their friends.

#### JUNE 18, 19—EDINBURGH

Here the American physicians will be the guests of the Royal Infirmary of Edinburgh under the direction of Sir Harold Stiles, Sir Norman Walker, Sir Robert Philip and associates on the staff of the Royal Infirmary. A very excellent program is being arranged here.

#### JUNE 20—NEWCASTLE AND UNIVERSITY OF DURHAM

Clinics will be held by the Honorary Staffs of the Newcastle-upon-Tyne Royle Infirmary and the Princess Mary Maternity Hospital, Pensions Hospital, Children's Hospital and some of the special hospitals of the city. The arrangements here will be in charge of Sir Rutherford Morrison, Mr. George Grey Turner, F. R. C. S., and other members of the staffs of the hospitals and clinics of this city.

Demonstrations will be given at the University of Durham College of Medicine (which is located in Newcastle-upon-Tyne) and probably at Armstrong College.

#### JUNE 21 to 27—PARIS

June 21 the entire party will leave for Paris, via London.

June 22 to 27, the time will be spent in Paris. The clinic arrangements are under the direction of a large number of the most eminent members of the profession both medical and surgical, including Professors Tuffier, Drs. De Martel, Gossett and Delbert in surgery, Drs. Sebilean de Fourmentel and Lermoye in Oto-Rhino-Laryngologie, Drs. Vidal, Chauffard, Sergeant, Levaditi and Martin in medicine and Prof. Morax and Delapersonne in ophthalmologie.

Among the numerous social functions of Paris are the following: A reception given on June 22nd by the Academy of Medicine; a large reception given in honor of the American physicians by the Municipal Council of Paris at the Hotel de Ville (City Hall); an evening reception by the Inter-Allied Assembly and a reception by Prof. Tuffier at his country home, which is located near Versailles.

Honorary Memberships will be conferred upon distinguished Statesmen, Soldiers and citizens of France.

Besides the clinics and social features, there will be wonderful travel features.

Paris will be the end of the regular tour, but there will also be a sailing home a week later allowing the American physicians, their families and friends to stay a longer time in Paris with more extensive sight-seeing and giving the physicians the opportunity to attend the clinics at Strasbourg and Lyon where elaborate clinics are now being prepared for their benefit. This part of the tour will be given at the lowest possible cost in addition to the regular tour.

#### PRICES:

(c) With first-class, high grade hotels and cabin ocean passages—  
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Chicago to Chicago— 750.00  
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The last classification is offered to doctors and medical students who are desirous of having the chance to avail themselves of the wonderful clinic opportunities of the tour. As this Association is purely an educational Institution and is working for the medical profession as a whole, the Board of Trustees decided at it's annual meeting that this class should be included.

#### EXTENSION TOURS

The opportunity will be given to the physicians subsequently to the main tour to visit practically all the main clinic centers of Europe, through extension tours, conducted by the Temple Tours of Boston under the direction of this office.

It is necessary in order to hold space for the tour to send to the office of the Managing-Director the sum of \$65.00 per person. If for any reasons the applicant for space decided that he cannot take the tour, the money will be refunded immediately, if this demand is made within six weeks of sailing time. The reservations will be assigned and preference given on the ship and in the hotels in the order they are received, accompanied with check for \$65.00 per person.

This tour is open to members of the profession who are in good standing in their State or Provincial Societies and their families. No restriction of territory. This invitation is understood to be extended to Canadian physicians as well as those of the United States. The Association will also be able to take care of a limited number of lay friends of the physicians. This is possible on account of their not requiring clinic space.

For further information, write Dr. William B. Peck, Freeport, Illinois.

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No. 2

### THE RELATION OF APPENDICITIS TO (SOME) PELVIC CONDITIONS\*

A. S. RISSER, M. D.  
BLACKWELL

Some eighteen years ago the writer was called in consultation to see a young woman who had all the cardinal symptoms of a severe acute appendicitis. Immediate operation was advised—but refused—and the patient fell into the hands of a surgeon who believed in waiting for operation until the infection had become "localized." Some weeks later, when the writer was permitted to witness the operation, the appendix, uterus, tubes and ovaries were found involved in a mass of adhesions. In accordance with the judgement of the operating surgeon the young woman suffered the loss of her pelvic organs. It was my conviction then that an early operation might have saved this patient the loss of her genital organs, as well as the added danger of the more extensive operation which she was compelled to undergo.

That conviction has been strengthened with the passing of the years and the surgical experience gained therein. In common with many surgeons it has been my lot many times since to find at operation a concurrent involvement of both the appendix and the pelvic organs. Thus, ovaritis, cystic ovaries, perisalpingitis resulting in distortion and fixation of the tubes and closure of the fimbriated extremity, parametritis, multiple adhesions of the pelvic organs to each other or to appendix or bowel or bladder—often frequently occur in cases where gonorrhoeal infection could be excluded, and even where no history of acute infection could be obtained. These findings raise several questions in the mind of the surgeon.

First: Were the appendiceal and pelvic infections merely coincident but unrelated?

Second: Was the pelvic inflammation primary and the appendix involved secondarily by contiguous or lymphatic extension?

Or Third: Was the appendicitis the pri-

mary, causative factor and the pelvic infection secondary?

Briefly to answer the first two questions: The possibility of independent disease concurrent in several organs cannot be denied. It does occur in other organs and the appendix is so frequently diseased that infection here may easily occur co-existent with disease of the pelvic appendages.

If the pelvic infection is primary, however, the resulting inflammation of the appendix would be rather a *peri-appendicitis*—and would not provide the risk of gangrene and perforation and abscess formation which so often follow infection beginning in the mucosa by impairing the naturally deficient blood supply of the appendix.

The evidence points convincingly to the probability that in the majority of such cases the infection was primary in the appendix.

To cite a few cases in illustration: B. N., a high school athlete, after some special athletic exercises was seized with pain in the abdomen. These exercises consisted in sitting on a chair with his feet under the bed and bending backward with his head to the floor—to "strengthen the belly muscles," as he put it. For two days he ascribed his pain to soreness of the muscles, and went about his daily tasks, even trying to continue his "track work"—when he fainted because of the pain. After a careful examination at our clinic a diagnosis of appendicitis was made—pus tubes could be excluded in this instance. Immediate operation was urged—and was accepted, largely on the advice of a friend who had undergone a drainage operation because of a neglected appendicitis. At operation the appendix was found below the pelvic brim, perforated and the pelvis full of free pus. The appendix was removed, the pelvis mopped out with ether, a drain inserted, and the boy is again a "star" football player, even though since his drainage operation he has had a secondary operation for the repair of the drainage hernia. But the question is pertinent: can such infection pass off without leaving sequelæ in the way of adhesions?

CASE II—Mrs. O. V., clerk, was seized with abdominal pain so severe that she had to sit in a chair for an hour before closing

\* Read before Section on Surgery and Gynecology, Annual Meeting Oklahoma State Medical Association, Oklahoma City, May 13, 14, 15, 1924.

time. At midnight the pain had increased in severity so that on arising to call her landlady she fainted. The diagnosis of salpingitis was considered at first but the symptoms pointed rather above the pelvis and to the left side of the abdomen. The left rectus was slightly more rigid than the right, and a tentative diagnosis was made of an inflamed Meckel's diverticulum. At operation the appendix was found in the left pelvis, gangrenous and lying in an abscess.

While this patient made a rapid and clinically a perfect recovery, the question presents itself: Can such an extensive infection occur without leaving scars in the neighboring organs?

*CASE III*—Nina C. was in school on Wednesday complaining of abdominal pain. On Thursday, at operation the appendix was found in the pelvis, perforated, and surrounded by pus. While pus in the pelvis seems to be more easily taken care of by the peritoneum than when higher in the abdomen, it requires no great stretch of the imagination to conceive that such infections—or even less severe ones in the pelvis—are prone to produce secondary pathology in the pelvic organs, a contention which the clinical experience of many surgeons bears out almost daily. The writer is convinced that many cases of pelvic pathology originate during childhood from an undiagnosed appendicitis.

Only very recently the writer was called to see Clarisa W., a girl, of six years of age who had been "adjusted" for two days by an osteopath for "summer complaint." Operation disclosed a ruptured appendix buried in a mass of adhesions deep in the iliac fossa. Bobby B. aged two and a half, was sent to my clinic for an X-ray examination for some abdominal trouble of a week's standing. After a physical examination of the baby the parents were told to economize on the X-ray and expend their funds for an operation for appendicitis. They finally consented and the appendix was found perforated, in an abscess behind the cæcum. The patients of both these children understood that they were "too young to have appendicitis." There is evidence which tends to show that some physicians share this same opinion. The writer feels that a more careful study of the indigestions of children will frequently disclose the appendix as a causative factor and that its early removal will prevent many of the pelvic sequelæ which are the subject of this paper.

It is interesting to note how frequently *menstrual disturbances* are accentuated by a diseased appendix even before it has caused a secondary visible pathology in the pelvis.

Thus the wife of a colleague was cured of a marked dysmenorrhœa by the removal of an acutely inflamed appendix which gave no history of a previous attack. It has seemed to the writer on several occasions that the physical and nervous disturbances of a painful menstruation could simulate almost any other pelvic or abdominal condition. Nausea and vomiting are often almost intractable; constipation is occasionally so marked as to simulate an obstruction. I have seen as great leucocytosis and fever during menstruation as in some cases of acute appendicitis proved by operation. Urinary disturbances are frequent, as is pain referred to some special point in abdomen or pelvis. This is particularly likely to be case if some pelvic anomaly is also present. A careful history is often more illuminating from a diagnostic standpoint than physical examination or even laboratory tests.

*Uterine Misplacement*—together with the circulatory and functional disturbances which often accompany the condition, can be mistaken for appendicitis. For example: Mrs. J. M., age thirty-one, with a history of one uneventful labor two and a half years previously, sought relief from constant pain of some five months duration. The pain centered somewhat to the left of the umbilicus and was so severe as practically to incapacitate her. There were no marked digestive symptoms and no rigidity, but tenderness to pressure was present. The history suggested that the pain came on soon after a severe fall—and since no anomaly other than a retroverted uterus was found at operation, a simple Gilliam's operation was done. On recovering consciousness the patient affirmed that her old pain was gone—and it has remained absent for some nine years, to her great satisfaction.

In the case of Mrs. S., aged twenty-six, whose one labor had terminated in a breech delivery and later a phlegmasia, the patient was an invalid for about one year with vague pelvic and abdominal pain and slight fever, so that a tentative diagnosis of tuberculosis had been made—by the rather risky process of exclusion, however. After most exhaustive examinations nothing but a retroverted uterus was found, and a suspension operation has restored her to health and usefulness.

The relation between appendicitis and *pregnancy* is important. The congestion of the pelvic organs incident to pregnancy, the alteration of natural relations and the pressure and interference with functions all predispose to the lighting up of a latent infection in the appendix. The fact that the peritoneum is more succulent and that the enlarged uterus



interferes with the migration of the omentum tend to permit unrestricted spread of the infection in case of rupture or abscess. For these reasons it would seem imperative to remove a diseased appendix as early in pregnancy as possible. However, operation can usually be done even in the later months of pregnancy with little danger of abortion resulting.

A recent experience of the writer is in point. The symptoms of a young woman referred to him for examination pointed to a ruptured appendix—but the patient was at least six months pregnant—and unmarried. Because of the writer's conviction that appendicitis during pregnancy presents an urgent indication for appendectomy, an operation was performed. The appendix was retrocecal, ruptured, buried in both old and new adhesions—there was history of previous attacks. The uterus, right tube and ovary were crowded up in front so that more than the usual amount of manipulation was required to gain access to the appendix and to wall off the peritoneum. Yet in spite of the trauma and the necessary drainage, pregnancy was uninterrupted—and some foundling home has now an added baby to place for adoption.

The relation of appendicitis to *tubal pregnancy* may be two-fold. First: infection from the appendix can easily—and the writer believes, often does—spread to the tubes and by causing adhesions and closure of their fimbriated extremities and distortion may result in tubal pregnancy and tubal rupture.

Second: In the differential diagnosis of the conditions it must be remembered that the severity of the symptoms of ruptured tubal pregnancy varies within wide limits, due to the varying degrees of hemorrhage and shock. As a rule the initial pain on rupture of a pregnant tube is greater than in appendicitis. The location of the pain and tenderness are apt to be low down, deep over Poupert's ligament. Muscular rigidity is less marked. Vomiting is rare in tubal rupture, common in appendicitis. Early fever and leucocytosis are characteristic of appendiceal infection while a subnormal temperature is common in tubal rupture. In addition, the signs of hemorrhage and shock may be present, such as anemia, rapid pulse of low tension, faintness or collapse. Bladder irritability and rectal tenderness are frequently present.

A careful physical examination is essential. Vaginal touch may show an enlarged tube or a pelvic hematoma. Inquiry should of course be made as to the menstrual history. Usually there has been a partial or complete absence of one or more menstrual periods—but it must

not be forgotten that even fatal hemorrhage has occurred within two weeks of a normal period. The menstrual history, however, may help or hinder the correct diagnosis, in accordance with the social status and the moral attitude of the patient as well as on the character of the audience present during the examination.

In illustration of this fact the case might be cited of Mrs. C., plump "grass widow" of thirty six years. She was visiting a sister twenty miles out in the country when she collapsed with pain in the abdomen. I found her with a small, rapid pulse, pale, extremely tender over the whole abdomen. Her family physician reported a history of repeated attacks of right sided abdominal pain. She had vomited several times. She gave a perfectly normal menstrual history—even after the necessity of truthfulness was explained to her. The pelvic examination was negative. The patient's condition seemed urgent and immediate operation under local anesthesia was accepted. This was done at mid-night, in the dining room, with the ironing board for an operating table and a gasoline lamp for an operating light. A low median incision disclosed the pelvis filled with both liquid and clotted blood which was scooped out literally by handfuls. The left tube, no larger than the little finger, had a large rent from which the blood was still oozing. The tube was ligated at the uterine end but at the pelvic brim some adhesions were encountered and a few whiffs of chloroform were given to permit retraction of the wound and ligation and section of the outer end of the ligament. The pelvis was mopped out and the abdomen closed. The patient made an uneventful recovery. Later it developed that her former husband had paid her a flying visit a few weeks previously.

In the diagnosis of some pelvic disease it would provide a good rule of procedure thus to paraphrase the sign commonly seen at railway crossings: "stop, look, listen—and feel." Such a method is necessary in differentiating between *infection of the tubes* and appendicitis. A careful history as to the onset and sequence of events is the first essential. In acute inflammation of the appendix the primary pain is colicky and is referred to the epigastric or midabdominal region later becoming localized.

In salpingitis the pain is pelvic. Nausea and vomiting are more usual in appendicitis than in tubal inflammation, while the initial fever and the leucocyte count are apt to be higher in salpingitis. The location of point tenderness and rigidity are characteristic in appendicitis. In tubal disease the tender-

ness and rigidity are lower, over the recti muscles on both sides usually, even though only one tube may be involved. It must be remembered, however, that the appendix is not infrequently located deep in the pelvis and even to the left of the mid line.

A history of menstrual and bladder disturbances argue for salpingitis—though these symptoms may also occur in diseased appendices located close to the ureter or bladder. Incidentally it may be added that the personal history is as important as it is often difficult to obtain, characteristically in pelvic cases. But, tact and freedom from the presence of listening, eavesdropping relatives and friends may elicit much information as to the personal habits and social standards of the patient which may prove enlightening in the diagnosis.

No examination, however, is complete without a careful vaginal, or rectal, examination. This will reveal pain and tenderness in the presence of tubal disease. But the question will frequently arise as to whether the salpingitis is secondary to appendiceal infection. The presence of pus in cervix or vagina, in the ducts of Skene's or Bartholin's glands is suggestive. The microscopic test is necessary. It must not be forgotten, however, that gonorrhoeal salpingitis and appendicitis may be coincident. One sign in the differential diagnosis which deserves greater acquaintance is the lumbar tenderness on the right side which is so frequently present in appendicitis.

The association of *cystic ovaries* and chronic or recurrent appendicitis is so frequent as to deserve consideration. Reasoning from analogy in other organs it would seem that sclerosis of the ovaries could result from recurrent infections or from even a mild infection long continued. This reasoning is borne out by the clinical experience of many surgeons who have found a relative frequency of sclerotic, cystic ovaries on the right side.

This association of ovaritis with chronic infection of the appendix is worthy of emphasis because it is particularly in young women when both the reproductive and the lymphatic tissues are most active, and the symptoms of pathology most frequent—so that our diagnostic skill is tested to the utmost. It is extremely difficult in many cases to measure the relative importance of these two factors of ovary and appendix in the production of symptoms.

In this connection a word as to the so-called "chronic appendix" may not be amiss. Doubtless the appendix has been wrongfully charged with symptoms which had their origin else-

where, but in the judgment of the writer, the appendix is as frequently overlooked as the primary cause of pelvic pathologic conditions. The famous dictum that "chronic appendicitis is appendicitis for revenue only," is epigrammatic, yes, but it is misleading if not scientifically untrue. Whether the pathology be due to acute attacks so mild as to escape diagnosis—to be unrecorded in the memory of the patient—or of what may be termed a latent, continuous process, chronic appendicitis is a definite pathological entity which we will do well not to ignore. Practically every organ in the body is subject to varying degrees of inflammatory reaction from the mildest to the most severe—kidney, liver, gall bladder, tonsils,—why not the appendix? The anatomic and physiologic laws governing the appendix are the same laws as control the other organs. Pathological principles and processes are the same—and clinical experience at the operating table and in the laboratory prove the existence of low grade, chronic processes in the appendix which are capable of influencing the body economy most profoundly. It is our task as surgeons to decide the relative responsibility of the ovary as of other pelvic organs in the differential diagnosis from appendicitis.

Great difficulty may be occasionally experienced in diagnosing an acute appendicitis from an *ovarian cyst with twisted pedicle*. Thus I have seen as great rigidity and distension of the abdomen, as severe pain and tenderness to pressure in cases of ovarian cyst with torsion of the pedicle as is common in acute appendicitis, the same symptoms of intestinal paralysis and peritonitis with thready, rapid pulse, as high leucocyte count and fever. Add to this the fact that early effusion of peritoneal fluid often obscures the presence of a tumor and that the pain and rigidity prevent a satisfactory examination, and we have a real problem which may test out every diagnostic resource.

To cite a case in point: Mrs. C. D., at twenty-seven, II para, and six months advanced in pregnancy, after a day of abdominal discomfort was seized with agonizing pain in the right side, cramplike, together with nausea and vomiting. On arrival at our clinic she was so thoroughly narcotized that it was impossible to obtain a first hand history. In spite of the narcotic the abdominal rigidity was so extreme as to prevent a satisfactory examination. The symptoms resembled appendicitis coupled with those of shock, so that at first rupture of the uterus was considered, but on closer examination there seemed to be a grove in the uterus, or between the



uterus and a tumor transverse and high in the abdomen, so that ovarian tumor was the tentative diagnosis.

At operation the appendix was found large, succulent, acutely congested so that in ordinary cases it would have seemed sufficient to explain the symptoms. On further exploration, however, we found the right broad ligament crowded into the posterior pelvis and lateral region of the abdomen, greatly elongated and twisted about itself one and one half times, contrari-clockwise. Attached to it was a large almost gangrenous ovarian cyst crowded above and behind the uterus. This was removed, the abdomen closed and the patient made a rapid recovery.

In going over the history with the patient during her convalescence, she recounted how the day before her acute attack, her abdomen had seemed to "change its shape." Knowledge of this fact might have simplified the diagnosis.

Other cases might be cited in illustration of the intimate relation which often exists between the appendix and the pelvic organs, did time permit. The purpose of this paper is to emphasize appendicitis as a possible factor in the causation of pelvic pathology as well as the need of early diagnosis.

#### A BRIEF REVIEW OF ONE HUNDRED CONSECUTIVE OPERATIONS UPON THE GALL BLADDER\*

McLAIN ROGERS, M.D., F.A.C.S.  
CLINTON

Believing it beneficial to review a considerable series of cases and weigh our end results before declaring dividends upon our service to the sick prompted me to present this paper. Often when we take figures from properly kept records we are not so flattered as when we casually reflect.

This series of 100 cases include our most recent cases and gives us a mortality of 16%, which is much higher than we thought before taking up this review. Four deaths here reported were not operated by the essayist but are properly included as they were operated in our clinic.

The average age in this group of cases was 42 years. The youngest 14 and the oldest 85 years. Below 20 years there were 2 cases, between 20 and 30 years there were 25, between 30 and 40 years there were 22, between 40 and 50 years there were 19 cases, between 50 and

60 years, 11 cases, between 60 and 70 years 16 cases, between 70 and 80 years, 3 cases, over 80 years 1 case.

We believe it is the consensus of opinion among surgeons of to-day that impressions, left by older writers that gall bladder disease is a disease of old age, are not founded upon fact as our series of recent cases and previous experience tend to prove.

We have divided this series into three classes, respectively: those in whom we did cholecystostomy, those in whom we did cholecystectomy with drainage and those in whom we did cholecystectomy without drainage. We did cholecystectomy in 16 cases which includes cases of severe jaundice, pancreatitis, virulent infections and where inaccessibility would make cholecystectomy more hazardous and less easy. Cholecystectomy with drainage includes 41 cases with active infection in gall bladder or gall bladder area and cases in which dissection was difficult and where trauma made drainage necessary for safety. Cholecystectomy without drainage includes 43 cases in which we had no active infection, in which we do not open the common duct, where there was little trauma or handling, and those where we felt secure in our technique throughout.

Of the 100 gall bladders here reported seventy contained stones in gall bladder or ducts, seven in which we found no stones contained pus; two with carcinoma, only one containing stones—of the remaining 21 cases 6 were operated for adhesions, three of which infection apparently originated in other regions and 15 cases with varying degree of pathology.

Of the 16 cases of cholecystostomy all contained stones except one, in which pathology was carcinoma. Of the four deaths in this group one was caused by bowel obstruction (ruptured gall bladder), one by pneumonia (ruptured gall bladder) and two from sepsis (carcinoma cases). Vomiting: One had persistent vomiting (obstruction case), two vomited several times and thirteen never vomited.

Of the 41 cases of cholecystectomy with drainage 28 contained stones, 4 cases not containing stones, contained pus. One fistulous opening in colon. Of 9 deaths in this group, two died of endocarditis, one died of hemorrhage on 17th day—a case of fistulous opening in colon and gall bladder ruptured emptying large quantities of fecal matter beneath liver and between liver and abdominal wall, cystic artery corroded causing hemorrhage. One died of sepsis from ruptured gall bladder with total necrosis, thrombosis of cystic

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artery. Two died of anuria, one on 20th day, the other on ninth day after operation. One operated under local and one under ether anesthesia. One case age 62 years, gall bladder previously drained, jaundiced, had interval vomiting for long period of time before admitting, enlarged glands at junction of hepatic and common ducts, partial obstruction, no blood discrasia except anemia, cause of death exhaustion. Two died of sepsis, both having bowel obstruction, gall bladder ruptured in both cases, one having been ruptured several days, other aged 68 had heart lesion of long standing, gall bladder contained stones and pus, ruptured, operated under local anesthesia, died of sepsis. Of this group in only two cases did temperature not reach 100 degrees to 100 degrees plus,—in fifteen cases 101 degrees to 101 plus, in only five did temperature reach 102 degrees F.

Emesis. Of the 41 cases 17 never vomited, seven vomited only once, four vomited twice, twelve vomited more than twice and in only one did we have persistent vomiting.

Of the 43 cholecystectomies without drainage 27 cases contained stones. Three of the remaining cases contained pus. One of the three deaths in this group was caused by hemorrhage from stomach on 8th day after operation—patient brought to hospital with agonizing pain in gall bladder region, badly jaundiced, operated as emergency, urine reported normal except bile, no blood count until third day after operation when found to have 200,000 lymphocytes and at this late hour we made diagnosis of lymphatic leukemia. Patient found in shock on 8th day, passed much red blood from bowels, post mortem showed no infection in gall bladder region, much blood in stomach and bowels. The second death in this group was caused by patient having violent vomiting, bursting wound and loop of intestine protruding and remaining in dressings for several hours, time not known, died of ileus. Third case died on 13th day of peritonitis, also had appendectomy, intramural shortening or round ligaments, fecal vomiting before death.

Temperature: Nine cases 99 plus, 20 cases 100 degrees, in nine temperature 101 degrees, two had temperature 103 degrees, none of these died and one, with bronchitis, made good recovery—in one case temperature reached 104 degrees, died.

Emesis: Seventeen cases never vomited, nine vomited only once, in 5 emesis twice only, twelve patients vomited three or more times but no patient in this group had persistent emesis. Comparative temperature in

these groups would serve no purpose as pathology in groups differ widely. The average number of days in the hospital in cases of cholecystostomy was 28 days, the group of cholecystectomies with drainage 22 1-3 days. In group without drainage, 18 days.

While we were disappointed in finding a mortality of 16% we have excluded no case where surgical procedure was undertaken. If we exclude the cases so desperate and moribund we could make a splendid showing but we should account for all deaths in those whom we treat surgically. A larger per cent of serious gall bladder conditions apparently come from rural districts and our clientele is composed largely of rural people.

We believe surgeons with good training and whose observation and experience have developed in them such judgment that they respect the liver and its appendages as being a most sensitive organ to trauma and exposure, will continue to lower mortality in gall bladder surgery by the strict application of such judgment.

After completing diagnosis one most important factor is to determine the physical condition and resistance of our patient, for nowhere in surgery does application of proper procedure mean more. See that your tissues are not famished for fluids, much good is accomplished by scheming to preserve a balance of vital economy, which in the desperate cases is much below par. Prevent hemorrhage and exposing liver to cold and trauma and you prevent much shock.

In cholecystectomies where drainage is necessary we believe it a matter of good judgment to place drains so as to not come in contact with stomach or other viscera, rather below this area coming out through stab wound or otherwise, in keeping with individual judgment.

We have practiced routine gastric lavage after operation upon the gall bladder for years and feel that it lessens nausea and vomiting and adds much to patient's comfort and welfare.

We believe in selected cases of cholecystectomy closing without drainage is to be commended:

- 1st, Because it saves much discomfort during recovery;
- 2nd, It saves much unpleasant suffering from post operative adhesions;
- 3rd, It shortens the stay of patient in hospital;
- 4th, It will prevent a certain amount of post-operative hernia that follows the best of surgeons in drainage cases!
- 5th, It most certainly teaches the surgeons the necessity of neatness and gentleness in gall



bladder surgery by reason of his fear of closing without drainage where there is trauma or a wet field from oozing.

We have operated a total of 67 cholecystectomies without drainage with only three deaths, all of which are recorded in this series. There was no leakage from ligating nor other accident from procedure.

We think the real danger in operation in this region and in operation of cholecystectomies without drainage particularly, is the serous exudate and oozing of blood, therefore a most gentle handling and painstaking technique is the greatest factor—consequently we who are deviating from the time honored and fixed principal of draining in surgery of the gall bladder, should not flaunt it at our less inspired colleagues as foot proof, but point out the hazards as well as the advantages of such procedures by giving true reports of facts taken from records properly and honestly kept.

#### "EXTRA-UTERINE PREGNANCY"\*

A. J. Sands, M. D.  
OKLAHOMA CITY

The study of pregnancy occurring outside the cavity of the uterus is very fascinating to the obstetrician. The early recorded cases show by what slow and laborious steps any advancement was made in the management of this condition which would offer any degree of safety to these poor unfortunate women.

As early as 1586 a case was reported by an Arabian surgeon wherein the bones of a foetus were extracted through an abdominal wound.

The early scattering records of cases were finally compiled by Wm. Campbell of Edinburgh, who published the first readable essay on this subject in 1842, under the title of "A Memoir of Extra-Uterine Gestation". This was followed in 1876 by a monograph by John S. Parry of Philadelphia, entitled "Extra-Uterine Pregnancy". This was a very comprehensive consideration of the subject.

Even as early as 1500 there had been reported a case of Cesarean section, and others about 1540. Some of these; especially one done by Jacob Nufer, a swine spayer in Switzerland in 1500, upon his own wife who made a good recovery and later bore several children; the one delivered by the abdominal route living seventy-seven years. This case was probably one of abdominal pregnancy.

The earliest, absolutely, definite history of a surgical operation for the removal of an ab-

dominal foetus was that done by Primrose in 1594. The history of this patient has become classical. She was twice pregnant with extra-uterine children, first in 1591, again, sometime before 1594. The cyst of the first child opened spontaneously through the abdominal wall. The fistula was enlarged and this child extracted by Jacob Noierus, a surgeon; this operation proving successful. Primrose removed the second infant by gastrotomy two months later.

Quoting from Schumann: "A case that may, upon the whole, be considered very characteristic, is related by Felix Platerus, 1594, in which the concubine of one of the sacerdotal order, at the close of her third pregnancy, endured for eight days pains resembling those of labour, which then subsided without however, being followed by delivery. After having for sometime, suffered from a variety of complaints, a small swelling the size of an acorn, formed a little above the umbilicus; it was laid open and an entire but semiputrid fetus extracted from the abdomen; and the hand thereafter introduced into the cavity for the remaining portions of the decomposed matter. The patient was restored to health, and survived the operation a year."

Following the case just related, there is no record of any operation having been performed for this condition for more than a century. Calvo reported a case in France in 1714. It will be noticed that all of the cases cited were examples of full term or long retained secondary abdominal pregnancies. The first recorded case of tubal gestation with rupture and the classical symptoms of this accident is that of Riblan, reported in 1604. He relates the case of a lady aged thirty-one who, with the exception of a hard, slightly painful tumor the size of a clenched hand, situated above the right groin, experienced no unusual complaint until she was about four months pregnant with her eighth child. January 2nd, 1604, she was seized with violent pains about the pubes, extending from the pelvis to the upper part of the chest, with occasional syncope, which continued until five in the morning when she died. The right fallopian tube was found to have contained a foetus; but the uterus was healthy and uninjured. The same writer relates a second example of this kind which occurred in 1639, when the patient was three months pregnant. She had such distressing pains for four months that she died in violent convulsions in the seventh month of her pregnancy. On dividing the abdominal parietes, the left fallopian tube much dis-

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tended and containing a fetus, presented itself.

In 1669, that master of obstetrics, Mauriceau, reported a case of ruptured extra-uterine pregnancy. This account is interesting because it shows the varying opinions held at this time. The text of his description being quoted as follows: "History of a woman in whose abdomen there was found, after death, a small fetus about two and one half inches long, together with a great quantity of coagulated blood. The history of this case deserved to be carefully examined into, to decide whether the fetus (as thought by many) was generated in the ejaculatory vessel, called the tube of the womb. On the 6th of January, 1669, in the village of Corrari, I saw in the hands of a surgeon called Benedict Vassal, a uterus which the same surgeon had a short time before removed from the body of a woman, aged thirty-two, who died after three whole days of torture with the most agonizing pains in the stomach, through which she had fallen into frequent fainting spells and the most violent convulsions. This woman had borne eleven children at term, but in her twelfth pregnancy at about two and a half months, the womb dilated in the direction of the right horn and unable to stand distention, ruptured. The fetus was cast out at once and found among the intestines of the mother, with a great quantity of coagulated blood in the lower abdomen. Many physicians and surgeons and other students of nature did as we, betook themselves to this surgeon to see this uterus (which he showed for a prodigy), persuading them that it was formed in the ejaculatory vessel which Fallopius calls the trumpet of the womb. They believed at once without any more investigation, that this was just as the said surgeon had told them and that this case confirmed stories of a like nature narrated by Riolanus. However, I examined the parts of that uterus most carefully and attentively, and it was known that those who had fallen into this opinion were in the error whither the surgeon was leading them, and for this reason, at that very time, I took a drawing of the womb as it then was and this is the more faithful, true drawing than that which the surgeon caused to be engraved on brass after an entire month, at which time the uterus retained almost nothing of its primitive form and was spoiled by the handling of a thousand men or more who had seen the uterus, pulled it, disturbed it, and turned it inside out that they might examine it. Many have brought forward this case to prove to us that the testes (ovaries) of women are full of little ova which at the

moment of coitus freeing themselves and emerging from the body proper of the ovaries are borne into the uterus through the tube, afterwards to serve for the generation of the fetus; and one of these so-called ova had by chance remained in the tube of this woman, instead of passing forward into the uterus and this was the cause of her death. Regnus Graaf, among others holds this opinion, for the confirmation of which he brings forward the figure of this uterus, which he painted from the case that this surgeon of whom I have already spoken had already given to the public as one finds it on the 260th page of the book on the 'Generative Organs of Women'; but any who will carefully examine the figure, which is the most faithful and faultless and at the same time examine into our reasons, will find that we have given another demonstration and that we believe that to be the true explanation." Here we have a very good description given of a case of ruptured tubal pregnancy 250 years ago, together with a discussion of the cause.

The first understanding of the true cause of extra-uterine pregnancy was given by Pierre Diones in 1718. His description gives practically the present day idea of causes of ectopic pregnancy except that he does not recognize salpingitis as a cause. The present day theory of course, being that this condition is the most common cause.

The first recorded case of operation of ectopic pregnancy in America was reported by Dr. John Baird in New York in December, 1759. Dr. Wm. Baynham, a country doctor of Virginia did the operation successfully on two patients in 1791-99. From this time on, occasional cases were reported and interest in the study of the condition grew.

Parry's work published in 1876 gave the results of 500 cases of extra-uterine pregnancy, 366 died and 163 recovered; a mortality of 67%. So the mortality in this condition has been reduced from 67% to 5% (?) in 50 years.

Classification of ectopic pregnancy as to location:

1. Interstitial,
2. Tubal,
3. Ovarian.

The exact type is often hard to determine when the case comes to operation. We find, however, that most cases are tubal and the literature available seems to show about 95% of all cases to be of this kind.

The question of whether the implantation takes place in the ampullar or isthmal site does not seem to me important, or whether it is in the right or left tubes. A large percentage of my own cases have been in the



left tube but I find in the records of many hundreds of cases the reports show but slight difference. Both tubes are involved occasionally. I have operated two such cases.

**Diagnosis:** The positive diagnosis of unruptured extra-uterine pregnancy is often very difficult and we find men of undoubted ability who are often times in error. The first consideration is the evidence of pregnancy viz: Amenorrhea, followed by "spotting" and history of pain in either fornix.

A partial rupture of the sac produces a condition which may be hard to differentiate from the following conditions:

1. Intra-uterine pregnancy with threatened abortion,
2. Hemorrhage from the tube or ovary, not in relation to pregnancy,
3. Acute salpingitis,
4. Acute appendicitis,
5. Ovarian cyst with twisted pedicle,
6. Ureteral or renal colic.

The most common of which is intra-uterine pregnancy with threatened abortion. The pain, however, and character of the hemorrhage in the second condition are quite dissimilar. Where there is a doubt as to the diagnosis, prompt hospitalization of the case is important so a careful observation of temperature, blood pressure and blood changes may be made. As soon as there is reason to believe that an ectopic pregnancy exists, laparotomy should be performed.

Bi-manual examination is of doubtful value except in connection with the history and may also be followed by disastrous results.

When an ectopic pregnancy has ruptured completely, the picture changes rapidly and doubt and difficulties of diagnosis are followed by a picture not easily mistaken. When a complete rupture has taken place, the patient complains of a sudden excruciating, lancinating pain; usually while about her daily duties. She falls in her agony and help is quickly called. We find her suffering intensely with rapid pulse; and evidence of shock. Any exertion or an effort to rise may be followed by fainting. Often there is obvious swelling in one lower quadrant. There is usually at this time a small amount of flow of a very dark color streaked with mucous, not clotting. This then is the picture of a typical case of a ruptured ectopic pregnancy.

**Treatment:** The treatment of this condition is of course, purely surgical. The only question to be considered is when to operate. It seems to me that is a decision to be reached by each surgeon in each individual case, using his own judgment.

I find in literature, the advice to wait and

that nature will take care of the hemorrhage and that the danger will be much less after the patient has recovered from the shock.

Some authors go so far as to say that these patients do not die from hemorrhage. Personally, I happen to know that they do. Having in mind one case in which the family refused operation and a few hours later, a secondary and fatal hemorrhage occurred.

My practice has always been to operate as promptly as possible following diagnosis of tubal pregnancy; whether ruptured or partially ruptured. I have never known a case in which the patient was operated, to die.

Statistics from several large hospitals in New York and Philadelphia with a series of 200 to 500 cases give a mortality rate of from 4% to as low as .9%.

To summarize: Ectopic pregnancy is a quite common hazard to women during the child-bearing age. The diagnosis in an early stage is difficult. After partial or complete rupture, prompt surgery is imperative.

*Discussion:* DR. M. H. NEWMAN, OKLAHOMA CITY.

Dr. Sands has given us a very interesting paper. The historical sketch is certainly illuminating. The subject would be more fascinating, if it were not so tragic. All I can add is to emphasize certain points in the diagnosis and treatment which the doctor did not have the time to elaborate on.

A discussion of the diagnosis of ectopic pregnancy opens a large subject. The fact that pregnancy of some type exists must first be confirmed, after which a localization of the imbedded ovum may be attempted. Diagnostic signs must also be differentiated into those present before rupture has taken place, those noted immediately after such rupture, and those apparent in later cases, an old encapsulated blood clot, or both present in the abdominal cavity. The diagnosis of ectopic pregnancy before rupture is extremely difficult. The symptoms are rather obscure and vague, and the woman in such condition rarely finds it necessary to consult a physician. Only when the marked symptoms referable to rupture or tube abortion make their appearance, does she become alarmed and invoke the aid of her physician, who, sometimes, fails to be impressed by the significance of the grouped facts in the history of the patient, and considers the case one of intra-uterine pregnancy with some irritability of the the uterus and possibly a threatened abortion. The evidence upon which a correct conclusion may be based are, first of all, the history; then the behavior of the menstrual flow; third the indefinite signs of pregnancy; fourth the

presence of pelvic pain; and lastly the elicitation of a tender mass in one or the other vaginal fornix upon vaginal examination.

A point worth while remembering is that abortion may occur in ectopic pregnancy as it does in intra-uterine pregnancy, and as in the later it may be incomplete or complete. When abortion is complete the bleeding ceases, when incomplete the hemorrhage continues.

A consideration of treatment of extra-uterine pregnancy divides itself into the management of certain phases of the condition. First: Treatment before rupture has occurred. It consists in immediate hospitalization and inspection of the tubes via the abdominal route as soon as practicable. The treatment should be directed, prior to the operation, solely with a view to the prevention of rupture or tubal abortion. Second. Treatment when a rupture of the sac has occurred with intra-abdominal hemorrhage. This condition will depend whether operation is practical or not. If the situation of the patient makes the immediate operation impractical, then conservation treatment is preferable and safer. A woman with a ruptured ectopic either dies almost immediately before aid can be rendered, or remains in a state of shock often amenable to treatment. The treatment will sometimes aid in overcoming to a certain degree, and to make surgery a safer procedure. When a patient has her first hemorrhage, provided she is not moved, and in the second place, nothing has been done to elevate the blood pressure too rapidly, she may get along all right. However, it is the opinion of men of large surgical experience to operate as soon as practicable. While it is true that the resources of surgery are rarely successful when practiced on the dying, yet of all surgical conditions ruptured ectopic pregnancy is one wherein even moribund patients sometimes recover with the most surprising rapidity.

## THE SIGNIFICANCE OF BLOOD FLOWING FROM THE ANUS\*

J. W. NIEWEG, M. D.  
DUNCAN

There are so many conditions in which there is an exudation of blood from the anus that its significance is of utmost importance and often requiring the greatest care to determine its source. Too often, a patient having bleeding from the anus is dismissed without an examination or with a mere cursory inspection, as having piles, when a finger or

protoscope would reveal a condition much more serious. Since the veins of the rectum are devoid of valves, trivial causes may produce hemorrhage. This should not deter one from making a thorough examination, as there might be a serious malignant condition lurking some where near. The majority of hemorrhages from the anus are not due to cancer, as the advertising quacks would have the laity to believe, but to more trivial causes. Since there is no way to determine the source of hemorrhage from the anus, without a thorough examination, it behooves us to use every means at our command to arrive at a correct diagnosis. No examination for the cause of anal hemorrhage is complete until after malignancy has been either diagnosed or excluded. The finding of ulcers, fissures, bleeding hemorrhoids or any of the other conditions that causes hemorrhage, is not sufficient to deter one from making further examination, as there might be a malignant condition farther up, that should have immediate attention.

For convenience, the study of the significance of blood flowing from the anus, may be divided in two groups, namely: That due to lesions located above the lower colon and that due to lesions located in the lower colon and below it.

### *Lesions Above the Lower Colon*

It is the intention of this paper to deal mostly with lesions located in the lower colon and the canal below it, the above subject will only be dealt with in a cursory manner.

Blood passing from the anus due to lesions above the lower colon may be occult or macroscopical. An occult hemorrhage that appears in the stools only once is of very little consequence, as it might be due to a slight injury or a trivial cause. Very often occult hemorrhages are continued over a long period of time, sufficiently long to almost exanguinate the patient. In such cases a thorough and painstaking examination should be made.

Macroscopical blood in the stools, when clotted, or of a dark color, the coffee ground or melena type, is due to lesions above the upper rectum, only in rare instances. Like occult blood, its appearance in the stools over a short period of time, if not profuse, is of no important consequence, as many minor causes, such as nose bleeding, may cause blood to find its way into the stomach and out at the anus. Profuse or long continued hemorrhages of this type must always be considered as grave and no time wasted in ascertaining its cause and instituting appropriate treatment. Conditions responsible for dark

\* Read before Section on General Medicine, Neurology, Pathology and Bacteriology, Annual Meeting Oklahoma State Medical Association, Oklahoma City, May 13, 14, 15, 1924.



colored blood in the stools are too numerous to mention within the scope of this paper and are purposely omitted. Before leaving this subject, however, I wish to call your attention to the current-jelly-like hemorrhage accompanying intussusception. Also to remind you that often hemorrhages follow osteopathic manipulations of the abdomen.

#### *Lesions in the Lower Colon and Below It*

Nearly all rectal diseases cause more or less hemorrhage. Bleeding is so often associated with hemorrhoids that we are prone to take too much for granted and neglect to make a thorough examination, dismissing our patients with a prescription for some hemorrhoidal cones. This is an injustice to the patient and a reflection on the intelligence of the physician. It is an injustice to the patient to have them dismissed without a thorough examination, to make sure that there is not some thing far more serious than hemorrhoids, and a reflection on a physician's intelligence to prescribe cones as a curative remedy for hemorrhoids.

Hemorrhage, when due to lesions in the lower colon or ano-rectal canal, are rarely ever serious during the primary stage of the disease by which they are caused. Though very often the patient becomes slightly anemic and nervous. The nervousness is rather excessive in comparison to the extent of the lesion.

Careful inquiry must be made as to the amount of the hemorrhage, the color, the time it occurs in connection with the passage of feces, whether or not it is mixed with the feces, if the entire bolus is covered with blood, small streaks on one side or if independent of bowel action. Fresh blood of a bright red color indicates a lesion in the anus, if partly congealed the lesion is more likely to be located in the lower part of the rectum, if clotted, of the coffee-ground type, in the upper rectum or lower colon.

The lesions responsible for hemorrhage may be a diseased condition, an injury or following an operation.

Hemorrhages due to carcinoma may be slight or excessive. The patient will have a history of having had a mucus discharge that later became tinged with blood. As the disease advanced, the blood predominated, almost obscuring the mucus. After deep crater-like ulcers have formed, the hemorrhage may be profuse, even to the extent of endangering the patient's life. At this stage there may be debris of ulcerated tissues floating in the hemorrhage.

The most common cause of hemorrhage due to lesions located in the ano-rectal region is capillary varicosities or internal hemorrhoids. As a rule, bleeding from hemorrhoids

is venous, occurring during or immediately following the passage of feces. The bleeding is usually slight, lasting only a few moments, though may be more persistent, as much as one half pint may be lost with each evacuation. Very often an inspection will reveal an ulcerated hemorrhoid protruding.

Fissure in ano is a frequent cause of hemorrhage. The bleeding is always slight, a long streak on the bolus or a bright red stain on the toilet paper. The characteristics of fissures is a severe pain during defecation.

Proctitis is not an uncommon cause of blood flowing from the anus. Since the bleeding comes from erosions in uncomplicated cases, the hemorrhage is never excessive, may be a slight oozing or the bolus partly covered with blood.

Hemorrhage is due to various forms of ulceration. They may be tubercular, syphilitic, entamebic, balantidic, chancroidal or any other form of ulceration.

The amount of the hemorrhage will depend on the amount of the ulceration. There are several other diseased conditions that cause hemorrhage at times, but are most always due to secondary ulceration, so the above will suffice without taking up each separately.

Injuries may be external or internal. External injuries are visible and need not be mentioned. Internal injuries may be caused by foreign bodies passing through the ano-rectal canal, lacerating a crypt or rupturing the mucosa. Some times a large hard bolus of feces will rupture the mucosa and cause a hemorrhage. The proctoscope or sigmoidoscope may be needed to locate the source of hemorrhage and remove the cause, which may be a pin, fish bone or any other foreign substance.

Hemorrhages following operations are usually reascent, occurring while the patient is yet under the care of the one who did the operation, making a diagnosis easy. But we must not lose sight of the fact that sometimes hemorrhages following operations occur as late as several months after the operation. An inquiry as to whether or not the patient has had a surgical operation of the rectum within the last few months, might avoid embarrassment later.

#### *Summary*

1. Every available means should be used to arrive at correct diagnosis.
2. No examination is complete until after malignancy has been diagnosed or excluded.
3. It should never be taken for granted that a patient having hemorrhage from the anus, has hemorrhoids and rectal cones or some other palliative treatment instituted.

4. The proctoscope and sigmoidoscope are indispensable in locating the source of hemorrhage, as high up as the lower colon.

# NON-SPECIFIC CONDITIONS OF THE POSTERIOR URETHERA WITH SPECIAL REFERENCE TO REFERRED AND NERVOUS SYMPTOMS\*

W. J. WALLACE, M.D. AND  
ELLIS MOORE, B.S., M.D.  
OKLAHOMA CITY

The reason for choosing this subject to write upon was to call attention to the prevalency of Non-Specific Conditions in the Posterior Urthera. It would be well to acquaint the general practitioner and some Urologists with the fact that many cases coming to him complaining of Urinary, sexual and nervous disturbances, negative to venereal diseases, should be examined thoroughly and intelligently treated or referred to the Urologist than allowed to continue whence the pathology will grow to be deeper seated and result in permanent disability.

The symptoms of Non-Specific posterior conditions of the urethera are classed by Young as Urinary, Referred and Sexual. We will be concerned mainly with the last two: (1) reflex pains or abnormal sensations, and (2) the disturbances of the sexual functions.

## *Symptoms—Referred Type*

The majority of patients with chronic posterior urethritis, non-specific, suffer no severe pains but there is usually a discomfort, a burning sensation or fullness as the urine begins to pass through the collapsed Urethera. An abnormal sensation is often referred to some point on the surface of the body. It may simulate the pains typical of prostatitis, as pains in the lumbar region, along the urethera, in the groin or manifested in general constitutional symptoms, nervousness, cold, clammy hands and feet, timidity and lack of confidence.

## *Symptoms Sexual Type*

The disturbances of the Sexual functions are many and quite uniform yet each case presents a little different picture. He may give the history of premature and painful ejaculations, incomplete or feeble erections, numerous nocturnal emissions, circulatory disturbances of the penis, and many other symptoms will be found in these cases of Sexual neurostenia. Again he may have a small amount of

sero-purulent discharge. These are sensory disturbances, due to the pathological changes in Vero montanum, the Utricle or the ejaculatory ducts, and the epithelial lining of the deep Urethera.

The methods of examining and diagnosing these cases consist of digital examination of the prostate and a thorough cysto-urethrosopic examination of all the parts of the deep urethera beginning with the trigone and vesicle neck including the prostatic urethera, paying particular attention to the condition of the mouths of the ducts to see if there are signs of infection or inflammation, closed or dilated prostatic ducts and whether or not they are properly draining the prostate gland. We view the Vero montanum. This is one of the most important organs with which we have to deal. True, it is small and well concealed but it has a great duty to perform. It is the governing agent of our sexual powers. Hypertrophy or atrophy, erosions, trabeculations and ulcerations of the Veru are some of the direct causes of the common complaint heard from our patients when questioned as to their troubles.

As in any other membranous tissue chronically inflamed one would expect to find hyperemia of the blood vessels, a generalized thickening of the tissues and the often spoken of "proud flesh" resulting from the long standing irritation. This hyperemia is accompanied by a serous exudation and desquamation of epithelium, creating a serous or sero-purulent discharge, the amount of which depends upon the extent of the lesion.

These cases bleed freely when the small arterioles are ruptured by instruments and manipulation of the scope.

There is another type of the posterior Urethritis which is of special interest to the Urologist. This is the Luetic type. These are not so uncommon as one might think. The chief complaint being the usual one of impotency, poor erections, or none at all. The characteristic feature of these cases is lack of pain during cystoscopic examination, even without the usual instillations of anesthetic solution.

Some of these cases with the above complaint doubtless have their etiology in the erectile fibers of the cord. Therefore, the treatment is anti-Luetic and will not be discussed here.

The etiological factors causing the complaint of which I have spoken are as follows: (1) Sexual Excesses, (2) Congestion-Erections—without relief, masturbation, (3) Alcoholic—Lowered vitality and chemical or Urinary irritations, (4) Formation of local ulcers, herpes, etc., (5) Constitutional weakness,

\* Read before Section on Radiology, Genito-Urinary Diseases and Dermatology, Annual Meeting Oklahoma State Medical Association, Oklahoma City, May 13, 14, 15, 1924.



(6) Improper or unintelligent treatment for any of the above conditions.

Some individuals seem to have a more or less congestive tendency of their mucus membranes and the highly acid urine produces ulcerations and erosions which cannot heal unless properly treated. These unhealed lesions often spread and form an irregular mass of reddened, thickened inflamed tissue.

The presence of this condition in the posterior urethra may be sufficient in itself to cause nervousness, generally and marked local trouble. Once some patients have trouble in their sex relations, they will lose confidence in themselves and experience difficulty in establishing faith in their ability.

A spotted appearance of the Urethra seen through the Urethroscope may be produced by alterations of the epithelium in the form of patches of thickened epithelia which have lost their normal color, thus resembling psoriasis of the skin. Erosions of the surface may be seen in the denuded spots, which in chronic Uretheritis have an unhealthy appearance, but when produced by instrumentation appear as simple abrasions. Ulcerations are characterized by loss of substance and a depression of the surface.

Tuberculosis of the Urethral mucosa may be the cause of ulceration and granulation and when present, increase the difficulty of examination on account of the extreme sensitiveness of the canal.

Under normal conditions the opening of the lacunæ of Morgagni are seen as small longitudinal excavations. The glands of Litre cannot be seen in the normal, but when the latter are affected by chronic inflammation, they are seen as pin head indentations of a reddish color. Chronic inflammation changes the normal lacunæ to be more gaping and their openings congested, from which sometimes may be seen to exude a purulent discharge. Papillomata are more common in the posterior Urethra than in the anterior section. Polyp of the Urethra are rare but when present are easily recognized. Carcinoma of the Urethra does occur and is usually a definitely diffused condition which may be recognized by palpation together with subjective and objective symptoms. Its effect upon the Urethral canal is that of a generalized stricture or tightness.

#### *Differential Diagnosis*

The normal healthy posterior Urethra causes no such symptoms as has been mentioned. There will be no Urinary, sexual or referred symptoms. The cysto-urethoscopic examinations will not reveal any such pathology as above mentioned. However, the sym-

toms arising from the non-specific condition of the posterior Urethra are most frequently mistaken for chronic prostatitis, stricture, chronic gonorrhea and endocrine disturbances.

Chronic prostatitis may often be mistaken or confused with posterior trouble because of the close proximity of the organs and because of the bearing one may have upon the other. Often times the patient would develop prostatic trouble from Uretheritis due to the partial or complete occlusion of the prostatic ducts, therefore, we may expect both proctitis and deep Urethral trouble in the same patient.

The same applies to seminal Vesiculitis. A great many nervous symptoms, neurosthenia disturbances of sexual orgasm, premature and painful ejaculations will be found in both cases. It is with these men that a thorough rectal and cystoscopic examination would reveal the cause of the symptoms and complaint, and enable the Urologist to render expert service.

#### *Treatments*

The treatment of these cases falls under two methods: (1) Local and (2) Constitutional. Fulgeration through the cysto-urethroscope is the quickest, and least painful, local treatment we can administer. More good can be accomplished in one sitting with this method than by ten applications of a caustic. Then, too, any chemical cautery will have a deleterious effect on the surrounding healthy tissue while the operator can apply the Fulgerating tip to the smallest area and do no damage elsewhere. There will be less pain and frequency and no more bleeding than with the chemical irritants. I have seen a great many cases treated by the old endoscopic route—applying the solid or liquid cautery every ten to fourteen days indefinitely and with no better results than with the electric cautery.

Deep instillations of the weaker silver salts following a sound and prostatic massage is an excellent stimulant to sluggish tissues. This kind of treatment is advisable every five to eight days or as the case responds.

Irrigation of 1:10,000 Potassium permanganate and 1,8,000 silver nitrate every three or four days alternating with prostatic massage and sounds of large size and deep instillations of Mercurochrome  $\frac{1}{2}$  to 1% or fresh silvol or Neo Silvol 10%.

As for a general tonic I would recommend mercury in the form of 1% cyanide with  $\frac{1}{2}$ % novocan to be given intra-muscularly every five or six days. The dose varies with the individual, usually 6 to 10 M being sufficient. Patients at times may be unable to

tolerate the average dose. He will complain of intense griping of the bowels—diarrhea, and sometimes nausea and vomiting. For this condition I have found that a thorough alkinization with sodium bicarbonate, 1 dram in hot water every two to three hours, hot water bottle to abdomen and hot sitz bath high on the abdomen. This form of mercury I believe to be the best tonic and to cause the least local and constitutional reaction.

A series of treatments are more beneficial than the prolonged intensive treatment for the latter always tears down as fast as it builds up—it is overdoing—too much treatment is often as bad as no treatment. Therefore, after the patient has had 2 to 3 weeks of the message, sound, deep instillations, irrigations, general tonics all guided by what changes we see taking place through the cysturethroscope, it is advisable to give him a rest from all treatment for a month during which time he should continue the bland diet—laxatives—regulation of the bowels—regular habits and plenty of rest. At the end of the month or six weeks he should return for an examination and re-checking. His further treatment will be dependent upon the findings.

As for the Luetic condition of which I have spoken, I would suggest the usual anti-syphilitic treatment intravenously intra-muscularly of both arsenicals and mercurials Pottassium Iodide in increasing doses. Sometimes intraspinal examination and medication is a very necessary part of the treatment of these cases.

The prognosis of these cases is good. True, the benefit and cure is a long, drawn out affair, but if his case is examined thoroughly, the trouble will be found. They have trouble, there is a cause for the trouble, and by intelligent persistent treatment, they will be greatly benefitted and cured. This, I think, should be encouraged to a moderate degree as it helps them forget the depressed feeling they have felt for so long.

#### *Case Reports*

H. S. D. Age 42, single, occupation, City Engineer. First came to our office complaining of frequent nocturnal emissions, nycturia 4 - 5 times—Priapism followed by pain, and giving the history of some prostatic trouble for a number of years. Gonorrhea 12 years ago—Intercourse makes patient very nervous and irritable, restlessness and general weakness lasting for several hours a day or so. Headaches follow emission and coitus.

Upon special examination our findings were as follows:

Prostate enlarged about three times nor-

mal size—extends high, fairly firm, moderately tender and contains material. No stricture but a marked tenderness of Urthera and a tightness at neck of bladder in prostatic Urthera. Cystoscopic examination reveals: bladder slightly inflamed with few small trabeculations. Both urethral orifices visible and functioning, rather marked acute trigonitis, prostatic urethera red and inflamed, ducts inflamed and congested, some bleeding points here, veru montanum greatly enlarged, red and ulcerated, ejaculatory ducts inflamed and appeared partly closed, due to the swelling and congeation, deep pockets or sulci on both sides, numerous bleeding points found in this area. The pathology here was too extensive to fulgerate. In these cases, it is more advisable to use dilation by sounds of large size, massage of prostate, irrigations and instillations until the field of inflammation subsides to local areas, when we can fulgerate. General tonics as mentioned above, diet and elimination.

This patient has been under our treatment and direction for over a year. He shows a marked local and general improvment. He is still taking some treatments but they are far apart. He was a type which could easily be taken for one of endocrine disturbance. There are many such cases.

R. D. H. Age 25. Student. Chief complaint frequent urination. Night urination 3 to 4 times. Frequent night emissions and ejaculations. All begun about nine months ago. Denies history of any venereal disease, some constipation. General health seems to be fair, appetite poor, patient very nervous and worries about every incident preparatory to his examinations, cystoscopic and general. Rectal examination reveals prostate smooth, no irregularities, roughness or tumor masses, but quite sore to the touch. Vesicles not involved but some material could be expressed from the organs. The special examination by cystoscope reveals the bladder almost normal with the exception of many highly congested arterioles.

Both urethral orifices seen and noticed to be functioning, no tumor or stone visible. Capacity about 8 oz. with no residual. Vesicle orifice normal, no bulging and no bleeding but the prostatic Urethera is inflamed, red thickened, and oedematous. The ducts are markedly inflamed. The veru montanum is swollen and reddened. There is a tumor mass anterior to and at the outer edge of the prostate. This mass is about the size of the normal veru and is ragged and inflamed. This pathology is the cause of the symptoms and complaint.



### *Treatment*

Fulgeration applied to the red and ulcerated areas. Patient given a tonic prescription, diet list, and advised that he should have irrigations, sounds and instillations. The results of two weeks treatment showed a marked improvement and party believes he is cured. He should be under observation for several weeks.

### *Conclusion*

(1) Although these cases of the posterior Urethra are seldom or only lightly examined and treated by the general practitioner and some Urologists, they are common and of great concern to the patient and should be as much to the physician.

(2) The Ethological factors so numerous and broad that they bring into the field practically every man at some time.

(3) The methods of examination are not so difficult, but exacting, and thoroughness is an essential feature, as well as persistence and patience.

(4) The treatments are simple, yet necessary, and the results are lasting and gratifying.

### **A NEW MERCURIAL**

What has been done for arsenic by the skill and patience of Ehrlich and his co-workers—that is to say, the presentation of it in a form that combines spirocheticidal activity with comparative safety of administration—has been done, it seems, for mercury also. This has long been the aim of chemical research—to find a mercurial compound that would kill the spirochete of syphilis without injuring the patient; in other words, a mercurial compound that could be administered in spirocheticidal doses.

Dr. Gruhitz, of the Parke-Davis laboratories, reports the demonstration of this property in Mercurosal administered intravenously to animals inoculated with syphilis. Two, or at the most three, doses eliminate the spirochetes completely from the syphilitic lesions. The doses corresponded to a dose of 0.2 gram for a man weighing 150 lbs., and it is believed that ten or twelve intravenous injections of a dose of this size should change a positive Wassermann to a negative in the primary stage of syphilis. Nevertheless, arsenic also (in the form of arsphenamin) or bismuth (as the salicylate) is advised, and a continuation of the treatment at intervals for two or three years.

Literature on Mercurosal is offered to physicians by Parke, Davis & Company, the manufacturers.

### **SQUIBBS ENTERTAINS EMPLOYEES**

Fellow executives, department heads and representatives of the sales staff of E. R. SQUIBB & SONS on January 3rd at the Hotel Commodore, New York, participated in the celebration of the twentieth anniversary of the association of Vice President Theodore Weicker with the House of Squibb. The feature of the happy event was the presentation to Mr. Weicker by President Carleton H. Palmer, on behalf of those present of a rock-crystal set with a center piece of old

English Spode ware. Although taken by surprise, Mr. Weicker who had already addressed the members of the Squibb Go-Getter Club, who had contributed the most consistent and constructive service during the year past, was quite equal to the new demand. His graceful response was another convincing demonstration of the genuine inspiration and kindly consideration he has extended to his co-workers throughout the years that he has sturdily maintained the sterling principles of the House of Squibb as established by its illustrious founder, Dr. Edward R. Squibb.

The presentation of rewards to the fifteen representatives of the sales staff who had qualified as the key Squibb Go-Getters during 1924 was another interesting feature of the program. R. D. Keim, director and general sales manager acted as toastmaster at the banquet and presided at the reception which followed.

### **YOUR INCOME TAX**

The exemptions under the revenue act of 1924 are \$1,000 for single persons and \$2,500 for married persons living together, and heads of families. In addition a \$400 credit is allowed for each person dependent upon and receiving his chief support from the taxpayer, if such person is under 18 years of age or incapable of self-support because mentally or physically defective.

The normal tax rate is 2 per cent on the first \$4,000 of net income in excess of the personal exemptions, credit for dependents, etc., 4 per cent on the next \$4,000, and 6 per cent on the balance. Under the preceding act the normal tax rate was 4 per cent on the first \$4,000 of net income above the exemptions and credits, and 8 per cent on the remaining net income.

The revenue act of 1924 contains a special provision for reduced taxes which did not appear in previous laws. All net income up to \$5,000 is considered "earned income." On this amount the taxpayer is entitled to a credit of 25 per cent of the amount of the tax.

For example, a taxpayer, may have received in 1924 a salary of \$2,000 and from a real estate transaction a profit of \$3,000. His total net income was \$5,000. Without the benefit of the 25 per cent reduction his tax would be \$80. His actual tax is \$60. From his net income of \$5,000 he is allowed a personal exception of \$1,000; the tax of 2 per cent on the first \$4,000 is \$80, one-fourth of which, or \$20, may be deducted.

For the purpose of computing this credit, in no case is the earned net income considered to be in excess of \$10,000. A taxpayer may have received for the year 1924, a net income from salary, of \$20,000, but the 25 per cent. credit can be applied to only one-half of this amount.

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DR. CLAUDE A. THOMPSON.....Editor-in-Chief  
308 Barnes Building, Muskogee, Okla.

DR. P. P. NESBITT.....Associate Editor  
814 Surety Building, Muskogee, Okla.

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### EDITORIAL

#### MAKING DENTISTS OF PHYSICIANS

Lately it has been proposed that physicians take on added burdens in the nature of seriously qualifying themselves in the field of dentistry. We cannot imagine anything quite so unnecessary, or anything which would add so much more of a burden to an already overburdened profession. The proposition seems to have no regard whatever for conditions as they exist, nor does it take into consideration the great amount of detail which must be mastered before even good physicians could properly fit themselves. It does not consider that as medical education now universally stands, years elapse before one is qualified as

a physician, and it seems to forget or ignore the fact that the making of a dentist is also a matter of several years arduous preparatory work. It does not take into consideration that in both medicine and dentistry the professions are the result of years of evolution and that almost unsurmountable objections must first be overcome, for each profession has very definite ideals and aims.

The happy and proper medium in this matter would seem to be that each profession give more serious attention to the problems of the other, where a clear understanding of the action and results of focal inspection may be placed on a standardized basis or agreement. If this is done, if some of us give more attention to the effects of dental problems upon our cases, and if the dentist realizes more the profound effect oral infections have on the general economy, the solution will be placed much further from criticism than at present. Why not begin holding systematic meetings at which dentists and physicians be present, each representing his views to the other, reconciling present day knowledge as far as possible? Many physicians and dentists already have a clear conception of these allied matters. The trouble lies in the fact that the mass of each profession pays little or no attention to the other.

#### YOUR MEDICAL SOCIETY— WAYS AND MEANS TO KILL IT.

(The New Orleans Medical and Surgical Journal has this to say as to the successful destruction of a Medical Society; we reproduce it here as "good stuff".—Ed.)

1. Don't go to the meetings.
2. If you go, go late.
3. If the weather doesn't suit you, don't think of going.
4. If you do attend a meeting, find fault with the work of the others and members.
5. Never accept office as it is easier to criticize than to do things.
6. Get sore if you are not appointed on committees, but if you are, do not attend committee meetings.
7. If asked by the chairman to give your opinion on some matter, tell him you have nothing to say. After the meeting tell everyone how things should be done.
8. Do nothing more than absolutely necessary, but when members use their ability to help matters along, howl that the institution is run by a clique.
9. Hold back your dues, or don't pay at all.
10. Don't bother about getting new members—"let George do it."



The Journal of the Michigan State Medical Society also suggests. "Don't go to your Parish Meetings if—

1. You know everything already.
  2. If you are impervious to new ideas when presented by others.
  3. If you have reached the acme of excellence and efficiency.
  4. If your ability cannot be improved.
  5. If you can't see any benefit in discussing the other fellow's suggestion.
  6. If you are too miserly to contribute some of your time to organized, co-operative effort.
  7. If you have no use for your fellowman.
- On the other hand if you want to be a part and an active supporter of your society—then go to every meeting."

### *Editorial Notes—Personal and General*

DR. DAVID ARMSTRONG, Durant, has been appointed County Physician of Bryan County.

DR. C. R. MORRISON, Red Oak, is spending the winter at Samoa, California.

DR. R. A. BROWN, Prague, has been appointed to the charge of the Odd Fellows Home at Checotah, and will assume his duties about February 1.

DR. C. E. BATES, Sulphur, for two years medical officer at the Soldiers Tubercular Sanatorium, has resigned to accept a position as tuberculosis expert with the U. S. V. B. at Oklahoma City.

PUSHMATAHA COUNTY MEDICAL SOCIETY newly elected officers for 1925 are: Dr. H. C. Johnson, Antlers, president; Dr. J. A. Burnett, Crum Creek, secretary.

TILLMAN COUNTY MEDICAL SOCIETY have elected the following officers for 1925: Dr. J. E. Arrington, president, and Dr. James D. Osborn, Jr., secretary-treasurer, both of Frederick.

ADAIR COUNTY MEDICAL SOCIETY officers for 1925: Dr. I. W. Rogers, Watts, president; Dr. R. M. Church, Stilwell, vice-president; Dr. Joseph A. Patton, Stilwell, secretary-treasurer.

MURRAY COUNTY MEDICAL SOCIETY elected the following officers for 1925: Dr. John T. Wharton, Sulphur, president; Dr. A. P. Brown, Davis, vice-president, and Dr. Howson C. Bailey, Sulphur, secretary.

NOWATA COUNTY MEDICAL SOCIETY met in regular session in December and decided to hold over the same officers for 1925; they are: Dr. J. P. Sudderth, president, and Dr. J. R. Collins, secretary, both of Nowata.

PAYNE COUNTY MEDICAL SOCIETY officers for 1925 are: Dr. Thom. A. Love, Ripley, president; Dr. W. N. Davidson, Cushing, vice-president; Dr. J. Walter Hough, Cushing, secretary-treasurer; Dr. J. A. Martin, Cushing, delegate.

DR. JESSE M. HARRIS, Kiowa, has removed to Wilburton.

DR. G. W. GRAVES, Hitchita, has removed to Brownfield, Texas.

DR. GUY CLARK, Durant, has recently removed to Wapanucka.

DR. C. G. SPEARS, Altus, has been visiting in Mississippi for the past few weeks.

DR. E. F. STEPHENS, Foss, has removed to Norman.

DR. T. J. DODSON, Picher, has removed to Norman, where he is taking up the treatment of x-ray and electrotherapy.

DR. J. E. COCHRAN, Byars, has removed to Wynnewood, and is in practice there with Dr. H. P. Wilson.

FELLOWSHIP application blanks for the AMA are available at the JOURNAL office for those who desire them.

DR. J. C. WOLL, Tonkawa, had brand' new Ford coupe stolen January 5, from the street, where he had it parked.

DR. GEORGE BORECKY, Oklahoma City, has been appointed to replace Dr. George Hunter in the Oklahoma City Health Department, Dr. Hunter resigning to become County health director.

DR. McLAIN ROGERS, Clinton, has purchased the Clinton City Hospital, after the question as to whether or not the city would sell it had been decided in favor of selling, at a general election.

TULSA COUNTY MEDICAL SOCIETY met January 12 at Tulsa, in the Municipal Auditorium, with the following program: "Nutrition of Infants", by Dr. C. E. Bradley, Tulsa.

OFUSKEE COUNTY MEDICAL SOCIETY has retained its 1924 officers for 1925; they are: Dr. C. M. Bloss, Okemah, president, and Dr. R. Keyes, Okemah, secretary-treasurer.

MCCURTAIN COUNTY MEDICAL SOCIETY elected: Dr. R. D. Williams, Idabel, president, and Dr. R. H. Sherrill, Broken Bow, secretary-treasurer.

Dr. E. S. LAIN, president of the Oklahoma State Medical Association, gave a clinic and lantern slide lecture in a meeting with the Payne County Medical Society January 7.

LINCOLN COUNTY MEDICAL SOCIETY officers for 1925: Dr. U. E. Nickell, Davenport, president, and Dr. C. M. Morgan, Chandler, secretary.

OSAGE COUNTY MEDICAL SOCIETY officers for 1925: Dr. E. N. Lipe, Fairfax, president; Dr. W. H. Aaron, Pawhuska, vice-president, and Dr. Leonard C. Williams, Pawhuska, re-elected secretary-treasurer.

CANADIAN COUNTY MEDICAL SOCIETY officers for 1925: Dr. C. A. Pearce, Calumet, president; Dr. W. J. Muzzy, vice-president; Dr. J. T. Riley, secretary-treasurer, and Dr. T. M. Aderhald, delegate, all of El Reno.

CREEK COUNTY MEDICAL SOCIETY elected the following officers for 1925: Dr. W. P. Longmire, Sapulpa, president; Dr. E. W. King, Bristow, vice-president, and Dr. J. B. Lampton, Sapulpa, secretary-treasurer.

JACKSON COUNTY MEDICAL SOCIETY elected new officers for 1925 as follows: Dr. E. A. Abernathy, president; Dr. C. G. Spears, vice-president, and Dr. W. P. Rudell, secretary-treasurer, all of Atuls.

COMANCHE COUNTY MEDICAL SOCIETY officers for the year 1925: Dr. E. Brent Mitchell, president; Dr. L. C. Knee, vice-president; Dr. G. S. Barber, secretary-treasurer, and Drs. L. T. Gooch, Thomas P. Lutner, and C. P. Hues, censors, all of Lawton.

BECKHAM COUNTY MEDICAL SOCIETY met January 13 at Erick and elected as officers for 1925: Dr. V. C. Tisdal, Elk City, president; Dr. W. D. Oliver, Erick, secretary-treasurer, Drs. J. D. Warford, Erick, Dewitt Stone, Sayre, and A. A. Huntly, Elk City, censors.

CUSHING MEDICAL SOCIETY conducted its annual election with Dr. H. C. Manning as president; Dr. J. E. Adams as vice-president, and Dr. J. Walter Hough, secretary. The members were given a demonstration of x-ray films on recent accidents in the community.

ST. JOHN'S HOSPITAL, Tulsa, a million dollar project, is being completed, and part of it promises to be ready for the next annual meeting of the Oklahoma State Medical Association at Tulsa, May 5, 6, and 7, 1925.

BRYAN COUNTY MEDICAL SOCIETY elected the following officers for 1925: Dr. H. B. Fuston, Bokchito, president; Dr. J. R. Keller, Calera, vice-president; Dr. John A. Haynie, Durant, re-elected secretary-treasurer; Drs. A. S. Hagood, and R. E. Sawyer, Durant, censors; Drs. James L. Shuler and John A. Haynie, Durant, delegates.

McLAIN COUNTY MEDICAL SOCIETY elected the following members as officers for 1925: Dr. I. N. Kolb, Blanchard, president; Dr. J. W. West, Purcell, vice-president; Dr. O. O. Dawson, Wayne, secretary-treasurer; Dr. W. C. McCurdy, Purcell, delegate, and Dr. W. B. Slover, Blanchard, alternate.

STEPHENS COUNTY MEDICAL SOCIETY had a very interesting meeting the last day of 1924, electing the following officers for 1925: Dr. W. S. Ivy, president; Dr. B. H. Burnett, vice-president; Dr. J. W. Nieweg, re-elected secretary-treasurer; Dr. J. P. Bartley, delegate; Dr. J. O. Wharton, alternate, and Dr. H. C. Frie, censor, all of Duncan.

CUSTER COUNTY MEDICAL SOCIETY met in annual meeting in December at Clinton and the following officers were elected for the year 1925: Dr. J. Matt Gordon, Weatherford, president; Dr. A. J. Jeter, Clinton, vice-president; Dr. J. J. Williams, Weatherford, secretary-treasurer; Dr. McLain Rogers, Clinton, censor; Dr. C. H. McBurney, Clinton, delegate, and Dr. Ellis Lamb, Clinton, and Dr. J. Matt Gordon, alternates.

LEFLORE COUNTY MEDICAL SOCIETY met December 14 and elected the following officers for 1925: Dr. G. R. Booth, Leflore, president; Dr. A. C. Hunt, Bokoshe, vice-president, and Dr. Earl Woodson, Poteau, secretary-treasurer.

KAY COUNTY MEDICAL SOCIETY elected officers for 1925 as follows: Dr. L. C. Vance, president; Dr. G. H. Nieman, vice-president, and Dr. J. C. Wagner, secretary-treasurer, all of Ponca City; Drs. C. L. Blanks, Ponca City, A. R. Havens, and W. M. Leslie, Blackwell, censors.

CLEVELAND COUNTY MEDICAL SOCIETY elected the following new officers for 1925: Dr. J. L. Day, president; Dr. G. W. Wiley, vice-president; Dr. B. H. Cooley, secretary-treasurer; Dr. C. S. Bobo, delegate; and Drs. Steen, Mayfield and Williams, censors, all of Norman.

LOGAN COUNTY MEDICAL SOCIETY met January 6 and the following officers were elected for the year 1925: Dr. William C. Miller, president; Dr. Dan Gray, vice-president; Dr. E. O. Barker, secretary-treasurer, and Dr. Miller, delegate; all of Guthrie.

MARSHALL COUNTY MEDICAL SOCIETY met in Madill in December, and selected the following officers for 1925: Dr. T. A. Blaylock, Madill, president; Dr. P. F. Robinson, Madill, vice-president, and Dr. W. D. Haynie, Kingston, secretary-treasurer.

ROGERS COUNTY MEDICAL SOCIETY officers for 1925 are: Dr. A. M. Arnold, Claremore, president; Dr. J. C. Smith, Catoosa, vice-president; Drs. W. F. Hays, J. C. Bushyhead, and W. P. Mills, all of Claremore, censors.

McINTOSH COUNTY MEDICAL SOCIETY elected the following officers for 1925: Dr. N. P. Lee, Checotah, president; Dr. F. L. Smith, Fame, vice-president; Dr. W. A. Tolleson, Eufaula, secretary-treasurer; Dr. G. W. West, Eufaula, delegate, and Dr. Tolleson, alternate.

CADDO COUNTY MEDICAL SOCIETY held its 21st annual meeting at Anadarko in December and elected the following officers for 1925: Dr. F. W. Rogers, Carnegie, president; Dr. E. L. Inman, Apache, vice-president; and Dr. Charles R. Hume, Anadarko, re-elected secretary-treasurer.

GRADY COUNTY MEDICAL SOCIETY'S new officers for 1925 are: Dr. W. H. Livermore, Chickasha, president; Dr. G. M. McVey, Verden, 1st vice-president; Dr. W. H. Cook, Chickasha, 2nd vice-president; Dr. A. B. Leeds, Chickasha, secretary-treasurer; and Drs. Martha Bledsoe and W. H. Cook, Chickasha, delegates.

GARVIN COUNTY MEDICAL SOCIETY elected the following officers for 1925: Dr. W. P. Greening, Pauls Valley, president; Dr. H. P. Markham, Pauls Valley, vice-president; Dr. J. W. Stevens, Pauls Valley, secretary-treasurer; Dr. John K. Lindsay, Elmore City, delegate, and Dr. C. M. Pratt, Lindsay, alternate; Drs. C. L. Sullivan, Elmore City, W. P. Greening, and E. H. Lain, Lindsay, constitute the Board of Censors.



AMERICAN COLLEGE OF SURGEONS, Arkansas-Oklahoma-Missouri-Kansas Section, will meet at Little Rock, Ark., at the Marion Hotel, on February 10 and 11, 1925, with clinics and clinical addresses at the various hospitals on the mornings of both days; a Hospital conference; a meeting of the Fellows of the American College of Surgeons on the 10th; a community health meeting on the evening of the 10th; and a scientific meeting on the afternoon of the 11th. The Credentials Committee, of which Dr. F. B. Fite, Muskogee, is a member, will meet there on February 10th, to pass on candidates for Fellowship.

WASHINGTON COUNTY MEDICAL SOCIETY 1925 officers are: Dr. O. I. Green, Bartlesville, president; Dr. J. D. Kiser, Bartlesville, vice-president; Dr. J. V. Athey, Bartlesville, secretary; Dr. W. E. Rammel, Bartlesville, treasurer; Drs. L. D. Hudson, Dewey, and J. G. Smith, Bartlesville, delegates, and Drs. G. V. Dorsheimer, Dewey, W. H. Kingman, Bartlesville, and B. F. Staver, Bartlesville, censors.

HUGHES COUNTY MEDICAL SOCIETY elected the following officers for 1925: Dr. W. B. Bentley, Calvin, president; Dr. P. E. Mitchel, Wetumka, vice-president; Dr. D. Y. McCary, Holdenville, secretary-treasurer; Drs. J. F. Musser, Calvin, C. A. Hicks, Wetumka, and J. D. Scott, Holdenville, censors. Drs. J. H. Kay and D. Y. McCary, program committee; and Drs. W. B. Bentley and D. Y. McCary, delegates.

CUSHING MEDICAL SOCIETY is having another term of grief with one or two of the insurance carriers on account of professional fees. The Cushing men passed resolutions urging all its members and men in the state to "keep the faith" and not continue fee cutting, nor to start it if going straight already. They further urge a general tightening up on collections, the latter also for the common good of all.

WOODWARD COUNTY MEDICAL SOCIETY met in December at Woodward, with a pre-natal clinic under the auspices of the Woodward County Health Center, Miss Coade, superintendent, conducted by Dr. W. W. Wells, Oklahoma City, and illustrated lecture on "Spinal Fluid in Health and Disease" by Dr. L. Skoog, Kansas City. The following officers were elected for 1925: Dr. J. C. Ross, Woodward, president; Dr. F. L. Patterson, Woodward, vice-president; Dr. C. W. Tedrove, Woodward, re-elected secretary-treasurer; Drs. T. B. Triplett, Mooreland, J. L. Patterson, Woodward, and C. E. Williams, Woodward, censors; Drs. J. L. Patterson and C. E. Williams, delegates.

THE OKLAHOMA HOSPITAL ASSOCIATION held its annual meeting at Tulsa, December 9, 1924, and elected the following new officers for 1925: Dr. Fred S. Clinton, Tulsa, president; Dr. McLain Rogers, Clinton, first vice-president; Dr. A. S. Risser, Blackwell, second vice-president; Paul H. Fesler, Superintendent University Hospital, Oklahoma City, secretary-treasurer. The next meeting will be held in Tulsa, May 1925. Dr. Clinton addressed the meeting on the organization and development of hospitals in the United States, and the meeting adopted a resolution asking amendment of the Workmens Compensation and Insurance laws of Oklahoma.

POTTAWATOMIE COUNTY MEDICAL SOCIETY met January 7 in regular annual meeting at Shawnee, with surgical and medical clinics dur-

ing the day at the Shawnee City Hospital, and a banquet and evening session at the City Club, with a program: "Pasteur", oration by Dr. LeRoy Long, Oklahoma City, and an address, "Leaves From a Doctor's Diary" by Dr. R. J. Crabill, Pharoah, followed by the installation of the new officers for 1925, who are: Dr. T. C. Sanders, Shawnee, president; Dr. William M. Gallaher, Shawnee, secretary-treasurer; Drs. J. E. Hughes, Shawnee, H. G. Campbell, and J. L. Fortson, Tecumseh, vice-presidents. Dr. Carl Puckett, State Health Commissioner, also addressed the meeting.

THE AMERICAN LARYNGOLOGICAL, RHINOLOGICAL AND OTOLOCICAL SOCIETY has completed arrangements for its 1925 convention which it will hold at The Ambassador, Atlantic City, N. J., May 22-25. The American Proctologic Society and the Association for the study of Internal Secretion will also meet at that hotel directly following the L. R. and O.

From advance reservations already received, officers of the three societies believe that the attendance will be the largest in the history of the organization.

CARTER COUNTY MEDICAL SOCIETY held its opening meeting of the year at Wilson, with a banquet given by the Wilson doctors, and elected the following members to office: Dr. T. W. Dowdy, Wilson, president; Dr. F. W. Boadway, Ardmore, vice-president; Dr. S. DePorte, Ardmore, re-elected secretary-treasurer; Drs. J. L. Cox, Ardmore, and C. A. Johnson, Wilson, delegates; Drs. S. DePorte and W. G. Langworthy, Wilson, alternates; Dr. Walter M. Johnson, Ardmore, censor. The following papers were presented for the evening: "Hand Infection", Dr. Walter Hardy, Ardmore; "Preventive Medicine", Dr. O. J. Gee, Ardmore, and "Pyelonephritis and its New Treatment", Dr. S. DePorte, Ardmore.

THE COMMITTEE ON PUBLIC POLICY AND INSTRUCTION OF THE PUBLIC is preparing to complete its plans for the year in the following manner.

Sometime between now and the Annual Meeting in May every County Society is to arrange an Open Meeting to which the general public is to be invited. At this meeting will be read the lecture that has been prepared by the Committee along the lines of Dr. Morris Fishbein's public address on "The Progress of Medical Science". This is written in very plain terms so that those who have not studied medicine can easily understand it.

The Secretary of each County Society is asked to get in touch with the members of the Committee nearest him, at once, and arrange the details of this public meeting. The Councilors of the several Districts are requested to assist their County Societies in putting on this program.

These meetings should be our biggest effort to "sell" regular medicine to our community. If the public understood what the medical profession is doing they would not be so easily misled by the various cults and health fads that are springing up from time to time.

Signed,

Wm. Bailey, Wesley Hospital, Oklahoma City, Chairman.

P. N. Nesbitt, Surety Building, Muskogee, Oklahoma.

A. S. Risser, Blackwell, Oklahoma.

McLain Rogers, Clinton, Oklahoma.

C. W. Tedrove, Woodward, Oklahoma.

**DOCTOR WILLIAM EDWARD DICKEN**

After suffering for more than seven years, Dr. W. E. Dicken, F. A. C. S., Oklahoma City, died at Monrovia, California, where he had gone in hopes of improvement nearly two years ago, on December 29, 1924. Dr. Dicken was stricken with the flu in 1919, which later developed into asthma and bright's disease, from which he died.

Dr. Dicken was born in 1872 and was a graduate of the College of Physicians and Surgeons, St. Louis, in 1901. He occupied the chair of Gynecology at Epworth University, was Superintendent of the City Board of Health, local surgeon for the M. K. & T. R. R., and physician and surgeon of the Baptists Orphans Home. He was the chief surgeon of the Oklahoma State Baptist Hospital, which he built in 1916. Dr. Dicken was a member of his county and state organizations, and a Fellow of the AMA. He leaves his widow, and a host of friends and colleagues to mourn his loss.

**DOCTOR JOHN POWELL MILLER**

Born January 19, 1851, and graduated from Vanderbilt University in 1884. Practiced at Cheyenne for 30 years, and died at Erick, January 20, 1925, of acute nephritis following influenza, aged 72 years. Dr. Miller was interred at Norman, Oklahoma, January 22, 1925. He was one of the outstanding members of his profession, and his death is sincerely regretted by his many friends and associates. He was a member of his county and state societies and of the AMA.

**OBSTETRICS and PEDIATRICS**

Edited by Carroll M. Pounders, M. D.  
532 Liberty National Building, Oklahoma City

**BOW-LEGS AND RICKETS—Current Comment,  
A. M. A. January 3, 1925.**

In the past, bow-legs has been looked upon, almost universally, as a result of rickets. The investigation of Barenberg and Bloomberg show that this view is erroneous. They used the most accurate means at our disposal for checking up these cases—viz, roentgenologic examinations, of the epiphyses and measuring the inorganic phosphate content of the blood. They found definite bowing of the legs in infants in whom rickets could be excluded both clinically and by these examinations. They also found that bowing was not due in such a large measure directly to the child's standing early or being overweight. Syphilis did not appear to be an important factor in causing either bowing of the legs or craniotabes.

**WHY ARE CHILDREN BAD—Health News and  
Views, Hygeia, December, 1924.**

Delinquent children are usually under par physically. This is shown by a study made in New

York of 743 children brought before the Children's court. Examination of these children indicated that the physical condition of delinquent children in general is much inferior to that of ordinary school children.

Seventy-nine per cent. of the children before the court had physical defects, while only 35 per cent. of public school children living in the same districts and of the same ages and nationalities had defects. The chief difference between the two groups so far as physical conditions were concerned seemed to be in nutrition and glandular disturbances.

**THERAPEUTIC FETISHISM IN PEDIATRICS.—**

John A. Foote, Washington, D. C.

Dr. Foote attacks the practice of prescribing useless medicines and remedies in pediatrics. The error usually consists of (1) the use of inert or useless medicines; (2) the use of Obsolete or undesirable preparations of an otherwise acceptable remedy; or (3) the employment of a remedy of limited therapeutic application in another field where it can be of no value. There are probably very few physicians who are not guilty of at least one of the offences which he condemns here. Chief among these are the following: Prescribing the disagreeable tasting, corrosive iron preparations that are very injurious to the teeth—such as the tincture or syrup of ferrous iodide—when the more palatable and less harmful preparations are just as effective—as the citrate of iron and ammonia. Prescribing calomel in the belief that it stimulates the flow of bile. Castor oil as a routine laxative is condemned because of its drastic and irritating qualities. The nauseating expectorants—such as ipecac and the salts of ammonia—that act only in a reflex manner—are refuted. The primary stimulants of bronchial and tracheal secretions are large doses of iodides. A warning is given against the administration of opiates and cough sedatives in premature and rachitic infants. The antidiarrheals and intestinal antiseptics—such as bismuth and salol come in for their share of criticism. They are proven to be ineffective. Quinine should not be given to children with respiratory infections. It is not a good general antiseptic and increases the danger of otitis media. The diagnosis of acidosis in vomiting children is made too often—and bicarbonate of soda administered. Among other things mentioned are: Bulgarian bacillus therapy, the pluri-glandular therapy and the use of mixed stock vaccines to prevent colds. Even the Bordet—Gengou bacillus vaccine as used in the treatment of whooping cough is thought to act only as a non-specific protein.

**EYE, EAR, NOSE and THROAT**

Edited by Jas. C. Braswell, M. D.  
726 Mayo Bldg., Tulsa

**INJURY OF THE LARYNX INDUCED BY X-RAY  
TREATMENT.—Strandberg, O. J. Laryngol. &  
Otol., 1924, 437.**

The author reports the case of a patient who was given x-ray treatment for lymphoma in front of the neck and became hoarse. Eight months after the last x-ray treatment he complained of pain in throat and dyspnoea. The cause was believed to be tuberculosis of the larynx, but on examination



no evidence of tuberculosis could be found. Histological examination of several pieces of the mucous membrane of the larynx showed no tuberculosis or cancer but revealed changes due to the x-rays.

Injuries to the larynx caused by the x-ray vary in character. The early reaction may appear in from one to three days after treatment. The true x-ray reaction of the larynx appears from ten to twenty days after the beginning of the radiation. The oedema may be serious but as a rule disappears in from ten to fourteen days. The late reaction of the larynx may be considered very serious. It is not possible to say exactly how long after one or several irritations the third reaction may appear. The late reaction will be found in the muscle, perichondrium, and glands, whereas the early reaction appears in the skin and subcutaneous tissue. The late reaction may not be preceded by other reactions.

**THE EFFECT OF TONSILLECTOMY ON THE GENERAL HEALTH OF 1,200 CHILDREN AS COMPARED WITH AN EQUAL NUMBER NOT OPERATED UPON.**—Kaiser, A. D. J. Am. Ass., 1924, 33.

Kaiser's conclusions from a comparison of 1,200 children subjected to tonsil and adenoid operations and 1,200 who were not operated upon, may be summarized as follows:

1. Striking improvement in the child's general health following the removal of tonsils and adenoids is not observed unless the cases are selected.
2. Tonsillectomy offers relief from sore throat, head colds and mouth breathing.
3. It lessens the chance of a discharge from the ear and its complications.
4. It assures some protection against glandular infections but it does not assure the immediate disappearance of the enlargement of the cervical glands.
5. It does not influence favorably or unfavorably infections of the larynx, bronchi or lungs.
6. It does not prevent scarlet fever or measles but it may influence the severity of these infections.
7. It seems to lessen the incidence of diphtheria.
8. It does not influence the incidence of chorea or rheumatism.
9. It decreases the incidence of heart disease.
10. It definitely reduces malnutrition.

**THE NATURE AND PATH OF INFECTION IN THE TONSILS.**—Howarth, W. G. and Gloyne, S. R. J. Laryngol. & Otol., 1924, XXix, 429.

The first series of cases was examined solely from the point of view of tuberculous infection while in the second a study of the secondary and pyogenic infections was made.

In all patients between three and fifteen years of age a bacterial infection was present, but many of the organisms were not pathogenic to mice. In about half of the cases in children with enlarged and unhealthy tonsils bacteria which were pathogenic to mice were found in some portion of the tonsil. The organism found most frequently was the streptococcus.

It appears that the infecting bacteria penetrate the stratified epithelium into the diffuse lymphoid tissue immediately beneath and thence along the

trabeculae to the capsule where they pass into the larger lymph vessels of the pharyngeal wall which drain into the deep cervical glands.

Tuberculous infection of the tonsil is not very common. According to the author's observation it occurs in about five per cent of the cases. In the majority the enlargement of the tonsils is due to saprophytic bacteria, pathogenic bacteria, and septic absorption from these infected tonsils causes adenitis. The most marked cases are those due to pyogenic streptococci. At a later stage, a tonsil already heavily charged with pathogenic and saprophytic bacteria may become infected with the tubercle bacillus. Probably the entire process is slow and insidious and the infecting tubercle bacilli are few.

As the infection progresses from the tonsil toward the cervical glands, the correct primary surgical procedure appears to be removal of the tonsil rather than the cervical glands. This is borne out by the fact that when the infected tonsils are satisfactorily enucleated the enlargements of the affected glands tends to disappear.

**THE TREATMENT OF CARCINOMA OF THE CONJUNCTIVA WITH RADIUM.**—Johnson, F. M. Am. J. Ophth., 1924, 3s, vii, 589.

The usual treatment of carcinoma of the conjunctiva has been excision with local cauterization, enucleation or exenteration. The author reports seven cases treated by unfiltered radiation which seem to prove that this method is preferable to surgical removal as the latter may spread the disease. Four cases had been operated upon and had developed a recurrence. After radiation there was only one recurrence near the site of the original tumor. In one case the eye was removed elsewhere before the completion of the treatment and a recurrence developed in the soft tissue of the orbit.

**BACTERIOLOGY and PATHOLOGY**

Edited by Wm. H. Bailey, A.B., M.D.  
Wesley Hospital, Oklahoma City

**"SURGICAL PATHOLOGY OF THE URINARY TRACT IN INFANTS"**—Drs. Bugbee and Wollstein, New York, Journal of A. M. A., December 13th, 1924, Vol. 83, No. 24.

The authors have made their deductions on a review of 4903 necropsy. The data thus obtained adds much to the information that it is now possible to secure in the study of the urinary tract in infants made possible through small caliber cystoscopes, x-ray, pyelograms and kidney functional tests. The review pays particular emphasis to the incident of malformations of the urinary tract, the relations of such anomalies to the general pathology and symptoms that had been presented and the bearing of such conditions on infant mortality.

The pathological anomalies found were, single kidney, fused kidney, renal displacement, redundancy of pyramids and papillae, rudimentary kidney, congenital polycystic kidneys, horseshoe kidneys, nephrolithiasis pyonephrosis and hydronephrosis.

The authors state that while duplication of the ureter and kidney are the most frequent anomaly found in adults and anomalies causing hydrone-

phrosis and pyonephrosis have been more rare, the opposite is true in children. Such malformations often result fatally in the early weeks or months of life.

Renal calculi were found in 13 infants under 1 year and one child was only 11 days old. The author's supposition is that calculi may form in the fetus and that faulty metabolism and the presence of infection in the mother may be the underlying cause.

Valve formation of the mucous membrane was found to be the cause of obstruction to the outflow of urine, followed by hydronephrosis in the largest number of cases. Hypertrophy of the verumontanum was the next most frequent.

The frequency of the occurrence of other malformations as atresia of the vagina, status thymolymphaticus, spina bifida, double clubfoot, cardiac malformations as patent foramen ovale, esophageal stenosis, imperforate anus, inguinal hernia, exstrophy of the bladder, epi and hypo-spadias etc., are called attention to by the authors.

They summarize their observations by stating that it is their belief that all infants, regardless of age, that present indefinite abdominal tumors, obscure abdominal colics, a disturbance of urinary function, hematuria, persistent pyuria, or continued symptoms of pyelitis should be given a thorough investigation of the urinary tract.

**THE DIAGNOSIS OF CANCER.**—By Dr. James Ewing, New York, *Journal of A. M. A.*, January 3, 1925.

The author states that on account of the vast field of benign and malignant tumors recognized today we should no longer be content with the simple report carcinoma or sarcoma. We should require to know the exact type of the tumor present, what degree of malignancy it shows and what its life history may be expected to be. We must form a complete clinical diagnosis and not rest merely on the histological report. He stresses the importance of the surgeons', as well as the pathologists', ability to recognize malignant tissue by gross examination. The author recognizes the value of quick frozen sections at the time of operation but also emphasizes the limitation of this method. He states that this method tends to discourage the careful gross examination of the tumor. He discusses the value in diagnosis to be gained from X-ray photography and the diagnostic aids from radiation therapy. His conclusions are that the function of the laboratory in tumor diagnosis cannot be gained entirely by the microscope, but must include data to be gained from all available sources and their estimation with the object of obtaining a complete clinical diagnosis and further of determining as far as possible the stage of the disease and its prognosis.

## TUBERCULOSIS

Edited by L. J. Moorman, M. D.  
611 1st Nat'l. Bank Bldg., Oklahoma City

**THE PREVENTION AND TREATMENT OF DIGESTIVE DISORDERS IN TUBERCULOUS PATIENTS.**—John L. Kantor., *The American Review of Tuberculosis*, July, 1924.

The well known connection between malnutrition and tuberculosis has been demonstrated again

by the inhabitants of central Europe during and since the war. Malnutrition requires more study and calls for careful treatment regardless of its cause.

Every malnutrition patient having, suspected of having or who is exposed to tuberculosis should have a thorough gastrointestinal survey and appropriate treatment. The anorexia of tuberculosis need not be a serious obstacle in the rational fattening of these patients. A small amount of extra food carefully supervised and actually taken by the patient will often result in a steady gain in weight. A well balanced, attractive, varied diet carefully prepared and well served is absolutely necessary. Physical activity must be carefully regulated by the physician. Smoking and unnecessary medication by mouth are to be avoided. Appropriate hydrotherapy and physical therapy are useful in many cases.

All digestive disorders in tuberculous patients especially constipation and diarrhea should receive prompt treatment, not only to make the patient more comfortable and to help in recovery from the pulmonary condition, but to avoid secondary infection in the digestive tract.

**THE PNEUMOPERITINEUM TREATMENT OF TUBERCULOUS ENTERCOLITIS WITH OXYGEN.**—R. L. Laney., *The American Review of Tuberculosis*, July, 1924.

The patient, suffering from fever, rapid pulse, cough with profuse expectoration, anorexia, and diarrhea with abdominal pain was, after careful consideration, given an intraperitoneal injection of oxygen with hopes of relieving the pain and diarrhea.

The skin was painted with idoine, skin and all the tissues anesthetized with 0.5% novocain and the injection made near McBurney's point. The oxygen was injected until the patient complained of much pain and fullness. The fever ceased to rise at once, and soon dropt to 99.6, appetite returned and the stools become normal. Cough and expectoration also improved. He was given a second injection with excellent results.

An artificial pneumo-thorax should be used in this treatment in order to measure the amount of gas given and to determine the intraperitoneal pressure before and after treatment. Although it is probably not a curative agent in tuberculous enterocolitis, it is a simple, safe method of giving the patient relief from many troublesome symptoms. It must be given much more study before any definite conclusions can be reached.

**TUBERCULOSIS OF THE PANCREAS.**—S. L. Van Valzah., *The American Review of Tuberculosis*, July, 1924.

Formation of tubercles in the gland substance of the pancreas is very rare having been found only once in over 200 autopsies on tuberculous subjects at the Fitzsimmons General Hospital, Denver, and being barely mentioned in literature. While a toxic sclerosis of the gland is common, it is not diagnostic of tuberculosis. The disease does not produce symptoms until late in its course when they are mainly those of pancreatic insufficiency. Pain is a prominent feature. There is no known cure.

The comparative freedom of the pancreas from tuberculous infection and the possibility of its aiding in overcoming tuberculosis in other parts



of the body is an interesting point. This relative immunity is apparently due to some inherent quality, either the pancreatic juice or some other substance produced by its cells.

**AN ATTEMPT TO CLASSIFY BY MEANS OF THE X-RAY CASES OF SUSPECTED AND DEFINITE PULMONARY TUBERCULOSIS SHOWING LESS THAN A DEFINITE PARENCHYMATOUS X-RAY LESION.**—Fred H. Heise and Homer L. Sampson., *The American Review of Tuberculosis.*, July, 1924.

A study of the X-ray plates of cases giving a history of previous hemoptysis, pleuritic effusion, or positive sputum but with no definite lesion as shown by the X-ray was made to ascertain if any help could be had from a more careful study of such plates in the diagnosis of this type of case.

A small number of cases were selected from the following groups: (1) non-tuberculous, (2) those giving a history of hemoptysis, (3) those with a history of pleuritic effusion, (4) those with a previous positive sputum report, (5) those with a combination of two or more of these findings.

These plates were then mixed and re-classified into the following groups: (1) those showing nothing but increased density or enlargement of the root shadows, (2) those showing a few or fairly numerous isolated tubercles, (3) those showing a definite heading along the trunks, (4) those showing definite pleuritic changes, and (5) those showing indefinite but probable parenchymatous changes. The incidence of a history of hemoptysis, pleurisy, positive sputum and rales was found for each group.

It was found that as the x-ray findings approach the parenchymatous type, the criteria of a positive diagnosis are found more frequently. The prognosis may be considered good in those cases having a history of hemoptysis, pleuritic effusion, positive sputum or rales but not showing a definite tuberculous parenchymatous x-ray lesion.

**THE VALUE OF TRUDEAU SANATORIUM'S FIVE DIAGNOSTIC CRITERIA OF PULMONARY TUBERCULOSIS IN NEGATIVE DIAGNOSIS.**—Lawrence Brown and Fred H. Heise. *The American Review of Tuberculosis.*, July, 1924.

A study was made of 264 patients admitted to the sanatorium who were diagnosed as nontuberculous and followed up for from 1 to 7 years. Since it is so very difficult at times to determine the presence or absence of tuberculosis and since the patients must be protected physically as well as socially, the greatest care and repeated observation and examinations are necessary in making a diagnosis. It is dangerous to accept a negative diagnosis over long periods of time without re-examination since clinical tuberculosis may develop at any time. However, a patient who fails to react to repeated doses of 10 mgn. of old tuberculin rarely, if ever develops active clinical pulmonary tuberculosis. When the 5 following diagnostic criteria are absent a negative diagnosis may be made safely. ((1) history of a hemoptysis of a dram or over, (2) a history of a pleuritic effusion, (3) persistent moderately coarse rales in the upper half of the chest, (4) a definite parenchymatous X-ray lesion in the upper half of the chest, and (5) tubercle bacilli in the sputum.

**THE SURGICAL TREATMENT OF PULMONARY TUBERCULOSIS BY THORACOPLASTIC COLLAPSE.**—Adrian V. S. Lambert and James Alexander Miller., *The American Review of Tuberculosis*, September, 1924.

Thoracoplastic collapse is of great value and significance in the treatment of pulmonary tuberculosis since it not only restores about 50% of the judiciously selected patients to a fair degree of health and some economic usefulness, but by freeing these patients of sputum renders a most important service to public health.

Close co-operation between physician and surgeon and utmost care in the selection of cases for operation are the most important factors in the success of this treatment.

The authors record their experience with 20 cases and give a close analysis of their 6 fatal cases. They conclude that the operative mortality may be reduced by the use of more skill in the selection of cases and by improved operative technique. They advocate performing the operation in two stages as a rule, resecting the upper ribs in the first stage since the power to cough and thus remove expectoration from collapsed cavities is preserved in this way.

**EXTRAPLEURAL THORACOPLASTY IN THE TREATMENT OF PULMONARY TUBERCULOSIS.**—William H. Hearle., *The American Review of Tuberculosis.*, September, 1924.

Thoracoplasty when first advocated by Simon, Heineche, Eastlander, and Schede, consisted of liberating restricted adhesions with a view to closing old tuberculous empyema cavities. Quincke and Spengler next attempted the collapse of tuberculous cavities by resection of part of the upper ribs. Neither of these procedures was successful. Brauer and Saurbruch developed what is now known as extrapleural thoracoplasty. Friedrich Brauer's surgical associate, performed an extensive operation of this description in 1907. Their method, attended by a very high mortality and many alarming sequelae, was developed and standardized by Sauerbruch in whose hands it is very successful.

The operation whose aim is to compress the lung and place it at physiological rest consists of a subpericostal resection of various lengths of the first or second to the tenth or eleventh ribs posteriorly. The work is always started over the lower lobe and is preferably performed in one stage, although two may be necessary depending on the condition of the patient. Since the ribs of the upper part of the thorax are less flexible than the lower ones and since cavitation occurs more frequently in the upper lobes or apices it is often necessary to secure collapse here by transplanting autogenous fat. The author considers Tuffier's apicolysis operation the best for this purpose.

Unilateral involvement, or a slight or arrested involvement of the other lung and failure of artificial pneumothorax are indications for thoracoplasty. The advice and help of a lung specialist are always absolutely necessary. It is contraindicated where no attempt at artificial pneumothorax has been made, when the other lung is too extensively involved, in miliary tuberculosis, tuberculous peritonitis, amyloid visceral changes and in the presence of nephritis or any other serious disease.

The author follows Sauerbruch's operative pro-

cedure with a few modifications. The postoperative period is very critical. The patients strength must be conserved in every way while shock, pain, cough and other conditions are combated in the usual way. Aspiration pneumonia, activation or aggravation of disease in the other lung, cardiac failure, pulmonary hemorrhage, wound sepsis, nephritis, and amyloid disease are the usual complications to be guarded against. This operation should be done under a local anesthetic alone since the use of a general anesthetic not only increases the risk of aspiration but by inhibiting the cough reflex prevents the patient from expelling the sputum expressed from the collapsed cavities.

The results obtained by the author in his series of 13 cases were practically the same as those obtained by Sauerbruch and others. Two or 16% died from the operation, 2, both of whom were in a poor condition before the operation, were unimproved, 6 were markedly improved, 1 slightly improved and 2 were classified as practical cures. He considers the operation a great advance in the treatment of pulmonary tuberculosis and feels that it should be done in all cases where it is indicated at a much earlier period of the disease, since advanced diseases necessarily increases operative mortality.

### ORTHOPAEDIC SURGERY

Edited by Earl D. McBride, M. D.

1006 First Nat'l. Bank Bldg. Oklahoma City

#### 1. COMPOUND FRACTURES.

##### THE CONSERVATIVE TREATMENT OF THE BONE INJURY IN COMPOUND FRACTURES.

—Walter G. Stern, *Journal A.M.A.*, Dec. 13, 1924. Vol. 33.

Operative intervention in closed fractures is at all times a hazardous and difficult undertaking. Three factors which are introduced when the fracture is compound are: (1) injury to soft parts, (2) introduction of infection, (3) the extensive interference with the circulation.

He practices the avoidance of all operative measures on the bones and does just as little manipulation as possible, but splints and immobilizes the fracture accurately and waits for period of possible infection to pass.

Too much suturing, and handling of soft parts will cause the damaged tissues to break down. He does not believe in cutting off or removing fragments of bones and says the practice of "debridement" causes more infections than it prevents. He says that one should remove as little tissue as possible and always remember that the worst looking most thoroughly crushed tissues may still be viable.

His technic is as follows: Prepare as for major operation using gloves and mask. The previously shaved limb is thoroughly cleansed with ether on a sterile sponge held with a sponge holder. The parts are draped with sterile sheets and the skin painted with 7.5 per cent. iodine followed by alcohol. With a small sterile sponge on a hemostat, tincture of iodine is carried to all parts of the wound and the excess of iodine removed with alcohol. The protruding ends of the bones are also thoroughly cleansed in the same manner and gently reduced. If the hole in the skin is too tight it may be opened with scissors.

As little disturbance as possible should be allowed afterwards.

#### 2. A FRACTURE CLINIC.—Isadore Cohn, *Arch. of Surg.*, Vol. 10, No. 1, Page 163, Jan. 1925.

He first mentions three cases of minor injuries which were diagnosed sprains, one being a fracture of the tarsal scaphoid, another, fracture of the astragalus and another slight fracture of the internal condyle of the femur. He states that the x-ray is the only positive way of identifying these injuries, and yet in each of these cases certain views in the X-ray did not show the small fragment and he mentions the importance of persistence of X-ray examination if fracture is suspected.

He treats fracture of the surgical neck of the humerus by abduction and external rotation and although he thinks that the Thomas splint or so called aeroplane splint are efficient he uses a light shoulder cap of plaster and abduction triangle under the arm. He begins movement at the end of the second week. In fracture of the ulna the epiphysis must not be mistaken for a fracture or a fracture mistaken for epiphysis. Reduction of the deformity of the upper third of the ulna is essential. If this is not accomplished the ulna acts as a pendulum swaying away from the mid-line stretching the internal lateral ligament thus diminishing the carrying angle. The brachialis anticus causes flexion of the upper fragment and diminishes the articular range with the humerus thus limiting flexion. Fractures of the upper third of the ulna had best be treated by hyperflexion of the elbow. In fractures of the radius near the wrist if the relationship of the styloids are not restored there will be a permanent limitation of flexion at the wrist. Normal function at the wrist is dependent on the maintenance of the normal axis of the radius. Change in this axis alters the articular surface relationship with the carpalscapoid and semilunar. In turn they act as a wedge thus limiting flexion. Anesthesia should be given in all cases and after the reduction plaster moulded splints are applied to the palmar and dorsal aspect of the forearm. The normal line, which he calls Skinner's line through the shaft of the radius is a plane passed through the middle of the long axis of the shaft of the radius. Intersection of this plane at right angles by a plane passed through the tip of the styloid of the ulna if reduction has been complete finds more than one half of the base of the radius below it.

He treats fracture of the neck of the femur by the Whitman abduction method, placing them in a plaster cast and does not permit weight bearing for several months. In fracture of the shaft of the femur he believes that conservative non-operative treatment will give equally as good results as any other method when proper attention is given to details. A proper traction table must be at hand, also a portable x-ray is almost essential. The cast should not be left on longer than three or four weeks. The knee is then moved and massaged. At the end of six or eight weeks the casts are removed and a non weight bearing brace which has a leather moulded jacket for the thigh is worn by the patient.

The brace must be worn seven or eight months. If reduction cannot be accomplished by traction, continuous skeletal traction is indicated and tongs of the Edmonton type are the best because it permits early movement of knee and ankle.



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### THE ROLE OF ARSEPHENAMINE IN THE TREATMENT OF SYPHILIS\*

CHARLES B. TAYLOR, M.D.  
OKLAHOMA CITY

When in 1910 Ehrlich announced his "Therapia Sterilisans Magna" the Medical World was astounded and generally incredulous. The American Press, as ever on the alert for the sensational, heralded the tidings to the syphilitic world that there was a new discovery that would cure syphilis overnight. While Ehrlich quickly revised his first astounding statement, the Press had already passed to other sensations, and his correction received scant notice. Fourteen years later we are constantly being called on to explain that the announcement was premature, and that we cannot, as yet, cure syphilis with a single dose.

While the discovery of Salvarsan will go down in history as one of the great outstanding achievements of the twentieth century, we must not lose sight of the fact that it is only an adjunct in the treatment of syphilis. We must hold fast to the fact that there has been found no short cut to a cure.

I am impelled to present this paper because of the increasing number of cases of late syphilis I am seeing. Patients who have been "cured" by a few months treatment with the arsenicals; mothers who have brought syphilitic babies into the world after being assured that they were cured; husbands who have infected their wives, who in turn present them with diseased babies; men and women who are showing pre-ataxic or pre-paretic symptoms. There is a monotonous regularity in their histories. They read like this: "Salvarsan (or neo-salvarsan) for six, eight or twelve weeks, followed by a negative Wassermann". No mercury, no follow-up treatment. Just the bare statement that they are well because the Wassermann is negative. It is true that often the patient makes his own interpretation of the blood findings, and fails to report for further treatment; more often he is discharged by the physician.

What is the reason that a disease which is perhaps the most prevalent of the general

infections is so universally mistreated? A number of factors enter into the answer. The most important to my mind is salvaran. So wonderfully does this drug act in clearing up all early manifestations of syphilis that in a few weeks we have a patient who is clinically and serologically well. From then on he must be given his treatment "on faith" and receive it in the same spirit. A universal failing amongst mankind is to "Let well enough alone", and unfortunately medical men have their share of human failings. The proper treatment of syphilis is a long drawn-out, tedious affair. It calls for perseverance, tact and conscientiousness on the part of the physician, and confidence and trust on the part of the patient. Thirteen years after the discovery of salvarsan, Stokes said, "To tell a man with a four-day-old primary lesion that six months of treatment will cure him is mere folly—to tell him that a year will do so is rash—to tell him that two years will see him well is to enter on the border of conservatism".

Another important factor is the undue significance attached to a negative Wassermann by the physician, following a short course of treatment. If the trained physician allows himself to be misled by such a finding, how much more likely is his patient to misconstrue it. Parenthetically I will say that I keep my patients in ignorance of their blood findings until I am ready to discharge them.

A third, and I fear an important factor, is a matter of finance. No surgeon before operating tells his patient that he is going to charge him so much for each cut with his knife, so much for each snip of the scissors, so much for each stitch in the skin. To charge a certain fee (be it large or small) for each dose of salvarsan, for each injection of mercury, is to me objectionable. It detracts from the dignity of the performance. It keeps the commercial side prominently in the minds of both the patient and physician. It might easily prove unjust to one or the other. No surgeon makes his charge simply for the mechanical work he does in removing an appendix. He is paid for his skillful management of the case; his knowledge of what to do and when to do it. Innumerable factors enter into the case and for his skill and special knowledge he names his fee. He has not low-

\* Read before Section on Radiology, Genito-Urinary Diseases and Dermatology, Annual Meeting Oklahoma State Medical Association, Oklahoma City, May 13, 14, 15, 1924.

ered the dignity of his calling by charging an extra amount for his ability to properly interpret a blood count. So to mind does the syphilologist err when he makes a stated fee for each treatment. The many other aspects are lost sight of and each treatment resolves itself into a financial and mechanical transaction. Like the lost wanderer he "Can not see the forest because of the trees."

If we are to view a syphilitic patient with the gravity that the case deserves we must visualize him down a vista of years. We must recognize that not only have we this man's future welfare in our keeping, but the welfare of his future wife and children. We must get away from too close proximity to the trees and view the forest in its wide expanse. To do this we must at least possess a fair knowledge of the more common manifestations of late syphilis. We must keep abreast of the best thought and teachings as they are handed down to us by clinicians and pathologists. To do this we must know the relative value of the drugs we use; the proper dosages and their distribution through the body; the method of their elimination; their destructive action in certain cases; the possibility of cumulative action; the complications that often result from their long continued use. We must know what to do and when to do it. In short the *Management* of the case, if I may use that term, takes precedence over the simple mechanical process of giving an intravenous injection. Any tyro, given a week's instruction, can prepare and administer any single treatment. But until he is both willing and prepared to bring all that modern science has discovered to bear on the case, he should let syphilis alone.

### SYPHILITIC PYLORIC STENOSIS: SURGICAL TREATMENT\*

G. A. WALL, M.D. F.A.C.S.  
TULSA

The consensus of authorities consulted is, that syphilitic disease of the gastric tract is not so rare as we have been lead to consider it. There is no definite clinical picture, the symptoms depending on the extent and sight of the lesion. There may be the usual features of dyspepsia, or ulcer, and again the findings may suggest carcinoma, or still again all diagnostic signs may be absent, the patient making no complaint whatsoever of any gastric disturbances, until the later stages, or

when the disease produces a stenotic condition of the pylorus. The disease may go on and the patient may finally go to the operating table for an exploratory operation, when the condition then becomes apparent, if the operator is conversant with living pathology. Had a Wassermann been made, it would have made the diagnosis clear and perhaps saved the patient from an unnecessary operation. This test if positive, followed by the proper specific medication will bring on improvement and usually a cure; while this is suggestive, it may not be conclusive evidence of luetic infection alone, since we might have an ulcer in a syphilitic, and this not be due to the infection.

Eusterman (1) from an examination of sixty-five cases of gastric syphilis states, that organic gastric syphilis is rare, even in the advanced cases of systemic syphilis. The average age of patients is from 35 to 40 years, duration of the symptoms two years and duration of the infection twelve years. Exclusive of the advanced obstructing hourglass type cachexia is rare, anemia not marked and invariably a gastric tumor is not palpable. There is no symptomatology characteristic of the lesion. Localized involvement of the pylorus, without stenosis and with free HCL may stimulate benign pyloric ulcer. In obstructive cases the patients usually have pain and vomiting soon after taking food—the symptoms in the main closely approach the progressive form of scirrhus carcinoma. The symptoms common to all these cases were a fairly marked progressive course, pain, nausea and vomiting, good appetite but marked loss of weight without definite cachexia.

Gastric syphilis, says Larimore (2) has no characteristic clinical picture, and the facility with which syphilis imitates diseases of other etiology is very evident; different types and different stages of the disease present different pictures. A clinical course unusual to that of the suggested disease gives a clue, but the diagnosis must be made by exclusion.

Smithies (3) in 1915 stated that syphilis of the stomach was not as uncommon as clinicians believed. He observed 26 cases in 7545 patients afflicted with all types of dyspepsia. Oswald makes the assertion that 10% of all gastric ulcers are syphilitic, while Morgan is of the opinion that not more than 1% are specific, and Eusterman doubts if syphilis is an important etiological factor in simple gastric ulcer, because they were associated in only 1/3 or 1% in over 2,500 operatively demonstrated cases of benign gastric and duodenal ulcer. Rosenow holds that there is no evidence that simple ulcer ever becomes gum-

\* Read before Section on Surgery and Gynecology, Annual Meeting Oklahoma State Medical Association, Oklahoma City, May 13, 14, 15, 1924.



matous in the presence of systemic or gastric syphilis.

Castex and Mathis (4) on the other hand hold the extreme view that inherited or acquired syphilis is the exclusive cause of gastric and duodenal ulcers. Downes (5) from the statistics of stomach cases occurring at St. Lukes Hospital believes that the percentage of syphilitic patients, with definite evidence of stomach disease, will run higher than Smithies' statistics. Acquired syphilis of the stomach according to Brams and Meyer (6) anatomically proved, may be considered a rare disease; they were able to find only fourteen cases, in which the anatomical reports were sufficiently complete to warrant a diagnosis of gastric syphilis. These same authors conclude that we must not be lead into making a diagnosis of gastric syphilis simply because there is digestive disturbance co-existing with a positive Wassermann.

Eusterman (7) reviewing the pathology of gastric syphilis, states that the gross gastric lesion is a tertiary, usually late manifestation of the disease, in both the hereditary and acquired forms. It is the result of a definite or circumscribed gummatous infiltration of variable extent—a chronic productive inflammatory process, usually originating in the submucosa: This may involve any or all the structures of the organ, but having a predilection for the pars pylorica.

Symptomatically and anatomically, specific gastric disease may simulate chronic catarrhal gastritis, ulcer, fibromatosis, scirrhus cancer and tubercular disease of the stomach. The proper interpretation of the sources underlying gastric disturbances, in syphilitic subjects or in proved tertiary syphilitics may give rise to some difficulty. A large majority of syphilitics make no complaint of gastric malfunction, according to the findings of various observers, thus showing how insidious the disease is, and how far advanced it may become before we even suspect it, hence, it is a good rule to remember syphilis when all other signs fail. McNeil, quoted by Eusterman, in a review of 1,200 clinical syphilitics, states that only 8% complained of more or less serious forms of gastric disease and only 2 cases had organic syphilis. White reports 600 syphilitics with strongly positive Wassermann, and only 7% had gastric symptoms. Downes (8) thinks that the symptoms of gastric syphilis taken as a whole, vary but little from those of other stomach lesions of similar extent. Careful analysis, however, presents a striking difference—the pain is a most constant symptom, but lacks the periodicity of that occurring in simple ulcer and not much, if any, food pain incidence is present;

vomiting is a persistent and annoying symptom and was present in all of Downes cases. Hemorrhage not so frequent as in ulcer, which is remarkable, when the duration and extent of the lesions are taken into consideration. *A striking feature of the disease clinically, is the rapid and not infrequent loss of weight.\** Pyloric obstruction is probably due to the result of duodenal ulcer says Larimore (9). The age incidence, the duration of the illness, the failing nutrition, without cachexia, the early vomiting and the absence of palpable abdominal findings and of occult blood in the stools, altogether cast a great doubt upon a diagnosis of cancer. Downes agrees with Larimore in his clinical findings as to periodicity and food pain incidence. Nausea is unusual, but Downes, LeWald and Eusterman all agree that marked vomiting is present in 85 to 90% of the cases. Nearly all observers noted a marked and rapid loss of weight, without commensurate cachexia and loss of strength; likewise all agree that the appetite remains good. It is agreed by most observers that hematemesis is not regularly present, but Eusterman reports a case of syphilitic ulcer with a profuse gastric hemorrhage. Anacidity is considered by many as strikingly characteristic of organic syphilis, but Smithies does not agree to this, and states that free HCL may be normal or only slightly reduced. The essayist does not believe that the question of anacidity or acidity cuts much figure in the diagnosis of gastric lesions and Deaver (10) says: "Our experience with fractional test meals, as checked by operative findings in many hundreds of cases, can lead to nothing but the general conclusion that both in the absence and the presence of anatomic change in the upper abdomen, the acidity may be low, moderate or high. In my series of cases, the free and total acidity were within the normal limits in 25% of the cases of gastric and duodenal ulcers, while in 13% there was subacidity. In gallbladder disease we found a similar condition exists in the percentages of hyperacidity, subacidity and normal acidity. Occult blood we find to be of uncertain aid."

Niles (11) reported a case which presented the clinical and roentgenological picture of carcinoma. There was anacidity, weight loss, cachexia, distress after meals, vomiting, regurgitation of gas etc; and x-ray showed distortion due to new growth. Wassermann was 4 plus; the case was finally functionally cured by specific medication. Cases of this type are, however rare in the literature.

Graham (12) says, that it is worthy of comment that certainly in the majority of

\*Italics are mine.

cases, the diagnosis has been made by more or less indirect methods, such as the association of suspicious lesions with a positive Wasserman reaction, marked deformities of the stomach as revealed by the x-ray, but without the corresponding cachexia and anemia.

The following case report illustrates and confirms to a great extent the findings of the various observers as set forth in this paper.

J. S. T. aged 65 years was referred to me on February 13th, 1924 for operation for gastric carcinoma, with the following history. Had always been in good health until September, 1923, when he had an attack of the influenza, and was sick several days. Until this attack he never had any stomach trouble whatsoever, but since then he has begun to vomit up his food, but never has had any nausea or distress. He retains food sometimes forty-eight hours and then vomits it up. At the present time he can only take liquid food and he is compelled to take it very slowly, in small quantities, or else he vomits it up. He has been obstinately constipated for several years. During the past four months he has lost 30 pounds, weighing now only 95 pounds. His complexion and physical appearance are fair, except he is suffering from a mild anemia, but *no cachexia is present*. The skin is flabby from loss of subcutaneous fat. He has only ten teeth left and these are all decayed and much pyorrhoea is present. Tonsils and throat are negative. Lungs and heart are free from pathology. He has some bladder irritation and pus in the urine, but this is no doubt due to a Neisserian infection contracted in the summer of 1923. Temperature, 98.6; Pulse, 94; respiration, 22; blood pressure 100 on 64; urinalysis, Specific gravity, 1022 hg. 80%, polys, 78%, slight trace of albumen, red blood cells 1-2 to the field, white cells 400-500 H. P. F. He denies any luetic infection and there are no enlarged glands palpable. The abdomen is very rigid and negative to tenderness except in the pyloric region, and no mass could be palpated in this region.

**Roentgenological Examination.** Stomach fills well, except for the pyloric portion where the meal was held up sharply, and meal could not be forced through by manipulation. After a few minutes wait a small portion of the meal could be forced through the pylorus. Narrowing caused by some mass in the upper and probably posterior wall of the pylorus, and extending into the duodenum; considerable tenderness at this point. Rigidity prevented palpation and radiograms showed the same defect. Six hour examination

showed the stomach to contain a large amount of residue and the mealhead in the ascending colon. Stomach was empty in 24 hours and colon negative. The mass is probably carcinomatous but may have some other origin. Gastroenterostomy should be done to prevent starvation and confirmation of the diagnosis.

The physical appearance of the man, no cachexia and rapid loss of weight lead me to doubt the probability of carcinoma, and a Wassermann was asked for. The report came back 4 plus. The question then arose as to the best procedure to follow, whether to resort to intensive anti-syphilitic medication or to resort to surgery. We reached the conclusion that the man was starving to death and decided on operative interference to be followed by anti-luetic medication, as soon as possible following the operation.

February 14th, 1924, the man was given preliminary treatment and an operation was performed. Nitrous oxide anesthesia was given and a high right rectus incision made. Upon opening the abdomen a great many perigastric adhesions were found with a mild inflammatory condition about the whole stomach. The stomach was normal in size, but the walls were greatly thickened—the pylorus was free from adhesions and easily raised—the pyloric opening not patent. The whole pyloric region was involved in a smooth sausage shaped mass, not hard, but boggy in feeling and not dissimilar to the feeling of the stomach walls elsewhere. It was my impression that a definite scar was to be seen and felt on the anterior surface of the pylorus, indicating an old ulcer, but in this I was not fully convinced that my deductions were correct, lacking the confirmatory history. A posterior no-loop gastroenterostomy was done. The stomach walls were found to be 1.5 cm. in thickness, very pale on section and very friable—the condition being very similar to the pathology, described by Eusterman, viz: a chronic productive inflammatory process.

The tissues were so friable that I was fearful that the sutures would not hold but fortunately they did and the man did well, and made an uninterrupted and smooth recovery. He only had one spell of vomiting and this occurred during the first 24 hours and consisted of about one pint of dark fluid and presumably it was blood and mucous. The man was put to bed and 1/6th grain doses of morphia given for the first 24 hours: the patient was placed in the Fowler position after six hours—he began taking water in increasing amounts in 24 hours and was smoking



cigaretts on the second day.

On the 6th day following operation he was out in a wheel chair, taking soft food and his bowels were kept open by S. S. enemas as required. He left the hospital on the eighth day, in an automobile. Patient was referred back to Dr. H. T. Price for continuation of his anti-luetic medication.

April 22nd, 1924—x-ray of the stomach as follows: All stomach borders are smooth until the prepyloric region is reached, where is noted a massive filling defect. The stomach outline comes to a point in this region, leaving only a thready channel through which, however, the barium meal escapes into the duodenum. All three portions of the duodenum are definitely outlined. The meal also escapes freely through the gastroenterostomy opening and a large part of the jejunum is filled within a few minutes after the meal has been taken.

May 1st, 1924—Patient has gained 22 pounds, his complexion is ruddy, bowels are regular, appetite good and all kinds of food agrees with him and causes no distress—he walks several miles a day and says he feels fine. At this time he is under the care of a dentist for the treatment of his mouth condition.

Graham (12) concerning the treatment of gastric syphilis, remarks that surgical complications occur with greater frequency than commonly recognized. These consist usually of deformities produced by scar tissues formation in the healing of the syphilitic process. They are commonly seen, therefore, as stenoses at or near the pylorus, but sometimes as hourglass contractures or perigastrophic adhesions. In another group, in which there is impaired motility without organic stenosis of the pyloric orifice but with rather generalized sclerosis of the whole stomach, it is doubtful how much good, if any, can be accomplished by surgical measures. In a study of 34 cases (2 personal) resection of the pylorus gave uniformly good results in stenosis of that orifice, while gastroenterostomy was frequently followed by only slight or temporary improvement. It would seem, therefore, that pylorotomy is more likely to be followed by complete relief although a study of more may show that simple gastroenterostomy is sufficient in actual stenosis of the pylorus. There will remain certain without organic obstruction in which surgical measures will probably not be indicated.

The essayist feels that carcinoma, in this case, can be definitely excluded in view of the present x-ray findings—the marked im-

provement in his physical condition in the past three months, as evidenced by his gain in weight and ruddy healthy appearance. It must be admitted, however, that the question of an old ulcer as a complication is a debatable one.

CONCLUSIONS—1. That gastric syphilis is not so rare as we have been lead to believe.

2. That it may simulate almost any pathological condition of the stomach and differential diagnosis may be difficult.

3. That any stomach disorder, with rapid loss of weight and without cachexia, should make one suspicious of luetic infection.

4. That not all syphilitics will show any organic lesion in the stomach and that organic lesions in syphilis may be present and not be a sequella of the disease.

5. That all cases where a pronounced pyloric stenosis exists causing starvation, operation is indicated for relief.

6. That gastric syphilis may involve all the structures, but has a predilection for the pars pylorica.

7. That all confusing cases of stomach disorder should cause us to think of a possible luetic infection being present.

8. That we must not be lead into making a diagnosis of gastric syphilis, simply because there is digestive disturbance co-existing with a positive Wassermann.

9. That the differential diagnosis from carcinoma is at times difficult, even though we obtain the most careful clinical history, requiring at times an exploratory operation to clear up the diagnosis.

10. That the type of operation is still in dispute, but probably gastroenterostomy should be the operation of choice in the aged and poor risks, and in cases of doubtful diagnosis.

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*Discussion:* HORACE REED, OKLAHOMA CITY.

My experience with Syphilitic Pyloric Stenosis has been limited to a single case. The patient was a colored man under 30 years of age, who complained of marked gastric disturbance, and his attention had been called to a mass in the epigastrium. He had lost weight and consequently was rather emaciated. His symptoms were chiefly those of pyloric obstruction, namely: vomiting food

which had been ingested as long as a day previously, scant stools, etc.

X-ray examination showed a well-defined filling defect occupying a large portion of pyloric end of stomach. Violent peristaltic action of stomach was observed under fluoroscope. The barium meal had not all left the stomach at the end of 24 hours. There was hypochlorhydria but free HCL was present. There was not blood either in stomach contents or stool. A somewhat elongated mass with long axis extending transversely could be felt in the epigastrium. Wassermann reaction was mildly positive.

On exploration I found the mass to be due to a diffuse thickening of the walls of the pyloric end of the stomach. This thickening gradually diminished from the pylorus toward the cardia for a distance of about 3 inches beyond which the stomach walls were apparently normal. The perigastritis with adhesions, emphasized by Dr. Wall, was present.

Gastro-enterostomy was not done. He was placed on a vigorous anti-luetic treatment, and his gastric symptoms considerably improved during the course of the few weeks that he remained in the hospital following exploration. He was a patient in the service of the Veterans' Bureau Hospital and I did not get to see him again. I was informed by one of the staff members, however, that he returned to the hospital about one year later with practically the same symptoms as on previous admission.

It appears that lues attacks the stomach rather frequently, but we must admit that luetic pyloric stenosis is relatively rare. A patient with known syphilis who has stomach trouble should be vigorously treated for syphilis, but sight must not be lost of the fact that luetics may have other lesions of the stomach concurrently. If a patient who is luetic has pyloric obstruction to that degree that starvation is impending, be it from syphilis or what not, he is entitled to a gastroenterostomy.

Syphilitic gastritis may resemble a variety of gastric disturbances. The one diagnostic feature which is perhaps more characteristic than others, is the marked contortions of the stomach to be observed under the fluoroscope following a barium meal. These contortions are present even in the absence of pyloric obstruction. I had the privilege of seeing this characteristic demonstrated by Carman a few years ago.

Dr. Wall handled his case in an admirable manner. His results precludes any other con-

clusion. I am glad that Dr. Wall had the inclination and patience to go to the trouble of thoroughly reviewing the subject, which because of its relative infrequency does not claim our attention as urgently as many other diseases.

#### FURTHER OBSERVATION ON SYPHILIS IN THE NEW BORN\*

E. L. YEAKEL, M.D.  
SHAWNEE

In a previous paper read before this section in 1921, we presented a report on Syphilis in the New Born, as manifested in a routine examination of three hundred new born babies, including a Wassermann made from the umbilical cord. To-day we wish to add six-hundred and three to the list and briefly review our findings and deductions on the group of nine-hundred and three cases, covering a period of five years.

As many of our cases have been discovered, and by later test on the parents, been based on the Wassermann, we wish to state that we make no claim as to the infallibility of the Wassermann reaction, but so far, in infants we have never obtained a proven false positive. Naturally we have doubtless missed many cases of lues, but in the number of unsuspected cases we have found we feel amply repaid.

These cases cover the practice of one specialist, R. M. Anderson, from whose patients the greater number came, and the rather limited obstetrical practice of three of us, thus representing every walk in life in general practice. There are no negroes included.

Every test has been made by the same person, using antigens from one institution, so that we feel errors of technic or method have been reduced to a minimum.

In nine hundred and three cases we found thirty-five positive to two or more antigens—a percentage of three and 87 hundredths as against four and three tenths in our smaller series.

The great majority of these positives were in families totally unsuspected until our findings and often then it required "the acuteness of a prosecuting attorney and the adroitness of a diplomat" to search out the source. I believe one reason our percentage is smaller is because we have taken more serum tests on pregnant women. Nevertheless, we have not

\* Read before Section on Obstetrics and Pediatrics, Annual Meeting Oklahoma State Medical Association, Oklahoma City, May 13, 14, 15, 1924.



been able to get Wassermanns on a great number of mothers before confinement.

As I repeat things I have said in the previous article it is to be remembered that only by constant repetition can we convince or awaken some of our colleagues.

The further we have gone into this subject, and the more cases we see and study, the more astounded do we become at our lack of knowledge and the terrible multiplicity of form and symptoms under which syphilis masquerades. There may be almost any symptom or there may be absolutely no clinical evidence.

When you do easily recognize syphilis in the new born and especially those with a demonstrable skin lesion, in our experience, it is a very virulent form, and the great majority die from syphilis soon after birth, or in early infancy or childhood from some infection or dietetic error from which a normal child would easily recover. This happens with or without treatment, or in spite of any kind of treatment. These cases are almost invariably from the untreated active syphilitic parents.

The group of infants born of parents with congenital syphilis, an infection of low virulence, or who have received insufficient treatment, fall naturally into two groups. First, those babies in which there are no obvious lesions at birth but which develop symptoms during early infancy and childhood, and second, the group born without apparent demonstrable clinical evidence or symptoms but a positive Wassermann. These last two groups are the ones demanding our immediate diagnosis and treatment.

We have found that in spite of careful history taking, and in some cases a judicious beating around the bush, we cannot depend on the history of venereal infection unless positive and even then the patient may be in error or have fallen into unscrupulous hands. Especially is the venereal history of the married prone to vary from the lines of truth, so that the very ones that need a test during pregnancy are the patients from whom we are most likely to meet objections from husband or wife, and have them leave us to go elsewhere. The patient knows full well that blood taken from the arm in most cases means a Wassermann.

I have mentioned the multiplicity of symptoms encountered in syphilis of the new born, but shall further ask that at least you consider a possibility of syphilis in any infant, showing a mild asthenia, a glandular

adenophy, a anemia of varying degrees or splenic enlargement.

Three cases of interest, each of different type are selected:

Baby R—(1) The mother was infected at the seventh month and was given six doses of 0.6 gram arsphenamine, injections of mercury and some potassium iodide previous to delivery. In spite of this the baby was born with a four-plus Wassermann, and treatment immediately started and is still being continued. Never at any time has it shown any sign of syphilis and is now clinically a perfectly normal two year old child.

Baby S. B. L.—(2) This baby was first seen by me at the age of sixteen months when the parents were visiting in town. The parents who were in fair circumstances, brought the baby in because of fever and to find what new food I could suggest, as it did not gain. Weighed fourteen pounds, a pale anemic, malnourished infant presenting all the symptoms of what to me was syphilitic ataxic paraplegia. Pupils fixed, associated with optic atrophy. Spastic paraplegia both extremities. Spleen palpable, general adenophy and Wassermann three-plus. Father and mother both had two-plus Wassermanns. I tried to correct the diet and started as strong anti-syphilitic treatment as its condition seemed to justify. Two weeks later at six P. M. the child vomited and after a stormy night, died thirteen hours later of probable syphilitic meningitis with a temperature of  $107\frac{1}{2}$ .

Baby T—(3) I was called to see this baby, age six months, because it had fever and vomited. Without going into the details as to symptoms I will say that if ever a baby had tabes this one did. I knew the father had had syphilis and found the baby with a four-plus Wassermann. Under injections of sulpharsphenamine and bismuth and mercury I thought every thing progressing to an arrestment of active processes, when one morning at five o'clock the mother heard the baby cry and found it with a rigid neck and high fever. Another case of syphilitic meningitis as a terminal infection. This child died sixteen hours after onset, with a temperature of 108. And yet, until recently it has been said that they do not have fever with syphilitic meningitis.

I shall not say any more about the treatment of syphilis in babies, than to express my preference for sulpharsphenamine and mercury and bismuth injections. If I can get you interested enough to watch for syphilis I know you will work out your own meth-

od of treatment, which will probably be better than mine.

As long as public opinion in the United States holds that venereal disease is a disease separate, to be hidden and treated as a crime and not to be recognized as a common disease due to human error, just so long will the doctors be unable to successfully eradicate syphilis.

We must ultimately in the interest of the future citizens trust no one. Every mother should be tested frequently during pregnancy and every baby at birth and during early childhood. As the general practitioner does by far the largest amount of pediatrics and obstetrics, we must endeavor to interest him to the point where he will recognize that almost four per cent of our new born babies have syphilis, that symptoms alone are not dependable and that due to earlier diagnosis and the fact that almost every syphilitic adult has had some treatment, we must keep in mind our text book picture of syphilis in the new born, but emphasize the fact that either anemia, splenic enlargement, adenopathy or even a mild asthenia may be the only sign calling for a complete clinical and laboratory examination.

Lastly, that the pale anemic baby which has been switched from breast milk to cows milk, to Dryco, to Eagle Brand etc. because it does not do well is a fair candidate for a positive Wassermann.

May I ask that all especially interested in syphilis of the new born send for a copy of the Abstract of Congenital Syphilis published by the Division of Venereal diseases, United States Public Health Service.

#### POST-OPERATIVE PAROTITIS.\*

L. S. WILLOUR, M.D.

MC ALESTER

A rather unusual and very serious complication of operative procedures which any of us may encounter is inflammation of a salivary gland and the one most usually attacked is the parotid.

It appears that parotitis occurs most often under certain conditions, although, it may complicate most any operative procedure. In any condition where there has been a decrease in salivary flow where the patient has been unable to take food and fluids which stimulate salivary secretion, where the mouth is dry

and harbors infection this condition is most apt to present itself. The decrease in salivary flow due to the withholding of food following operation will make more possible the occurrence of this condition. Slight injury of the gland at the time of operation may also be a predisposing factor.

This infection results from direct extension along the duct or is carried by the blood stream or lymphatics from some focus within the body which may or may not be in the operative area. In the case which I have to present it is my opinion that it was the result of extension of infection along the duct with slight injury being perhaps an etiologic factor.

In looking up the operations in which this complication occurs, I find mentioned the following; operations on the adenaxa, extra-uterine pregnancy, appendicitis, intestinal suture following injury, colostomy for cancer of the rectum and in my case therapeutic abortion.

These infections are classified as follows: 1st, simple acute; 2nd, acute suppurative and 3rd, gangrenous. It appears to me that from what seems at first a simple infection may develop a very serious condition, this depending upon the treatment instituted, the number, variety and virulence of the infecting micro-organism and the resistance of the patient. If the tension caused by exudation the result of the inflammation is not early relieved the disease will rapidly progress from one classification to another terminating in the gangrenous form. If the infection is staphylococcal resolution is more apt to occur than when the infecting micro-organism is the streptococcus in which case the mortality is almost 100%.

There are many symptoms and complications which may arise and somewhat in the order of their appearance, they are as follows: Pain, (intense) swelling of the gland, spreading cellulitis, involvement down the neck even to the breast, extension forward to the eyelids and backward over the mastoid region, extension along the 7th nerve with development of meningitis or down the fascial plains of the neck to the mediastinum, spasm of the muscles of mastication as well as other muscles controlled by the 7th nerve and encroachment upon the pharynx with difficulty in swallowing may also occur.

The most satisfactory treatment of this condition is preventative, very much can be accomplished along this line by giving careful attention to the condition of the mouth preliminary to operation. In the cases in

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which salivary secretion has been scant it should be stimulated by the frequent administration of a few drops of lemon juice or the chewing of gum. Infections about the teeth or gums should be treated with the iodine. Post-operatively during the few days of food restriction, it has been my recent practice to advise the patient to chew gum which will keep the salivary glands active and the ducts flushed with the secretion.

The simple acute cases should be treated with heat or cold being very careful not to persist in this treatment unless the symptoms are without question subsiding.

When resolution is not satisfactory, exposure of the gland, with multiple puncture should be immediately practiced using the following technic. A "Y" shaped incision is made, starting 2 c. m. anterior to the ear at the lower border of the zygoma extending back to the ear, then down to, behind and below the angle of the jaw with one arm extending behind the ear over the mastoid region, this incision should be just through the capsul of the gland but no deeper for fear of injury to the 7th nerve which divides in the glandular structure. The skin, fascia and capsule are stripped forward and the gland punctured in many places, with sharp pointed forceps, the incision is then packed wide open and treated as any infected wound. In some cases drainage from the duct may be increased by a meatotomy, however, we can never expect sufficient drainage from the duct alone in the suppurative form of this condition.

If after this operation there is extension of the cellulitis and suppuration, other incisions will be necessary, especially farther down the neck and should be made at once if the indication presents itself.

The pus is usually deep in the salivary portion of the gland or in the lymphatic gland situated within the parotid, consequently it is plain to see the inefficiency of superficial scratching.

Prognosis: The simple acute form usually recover without operation. The diffuse suppurative carries a mortality of 30% while the gangrenous form is practically always fatal. The condition is not apt to recur but may become bi-lateral, the infection of one gland following the other.

I wish to report the following case briefly: Mrs. C. of Calvin, Oklahoma, first seen by me on New Years, 1924, suffering from vomiting of pregnancy which had persisted for four weeks and as the patient had received no water, food or medication except by

mouth and this promptly expelled, she was in very desperate condition being thoroughly dehydrated, mouth and tongue very dry, blood pressure, 90/60, pulse 114 and having the usual train of symptoms due to starvation. She was taken to the Hospital at this time, placed on the usual treatment for this condition including fluids by the vein and rectum, corpus lutum per hypo, etc. (I will not go into the treatment of this condition as it in itself would constitute a paper and introduce a subject which would provoke much discussion) however, under treatment she showed considerable improvement and returned home in two weeks. Ten days later the symptoms had all recurred with even greater severity and she returned to the hospital. After consultation with Dr. J. A. Munn of McAlester, it was decided to empty the uterus which was done the following day. Post-operative condition was normal up to the third day when she complained of soreness at the angle of the jaw and very slight swelling presented, this I first attributed to some injury inflicted by the anesthetist but as it was a progressive condition, being worse the following day, with stiffness of the muscles of mastication a diagnosis of parotitis was made.

Three days later (which I believe now was too long a delay) a classical incision was made, the gland exposed, multiple punctures made and the wound packed. No pus was found at the time of operation but appeared in considerable quantity 48 hours later. A few days later the swelling occurred along the sterno-mastoid muscle below the end of the first incision at which point another incision was made and considerable pus evacuated. All this time there was some drainage of pus from the duct. The external auditory canal became nearly closed by swelling from below, an opening was made and drainage established. From this time on convalescence was satisfactory, the patient making good recovery without any disagreeable sequelæ. There had been no involvement or injury to the facial nerve and but little induration of the gland remaining. There had been no local complications following the emptying of the uterus.

It appeared to me that the first operation made was very thorough but the extension of infection along the sterno-mastoid muscle and to the external auditory canal would indicate that it was not radical enough to immediately control the spreading of infection.

#### CONCLUSIONS

1. Any soreness about the angle of the

jaw following operation should be considered seriously as an infection of the parotid.

2. Opening and exploration of the gland should be accomplished early and thoroughly.

3. If extension of infection occurs it should be attacked at once.

4. Do not neglect prophylactic measures in cases where it appears that this complication may arise.

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## SARCOMA OF THE CHOROID-CASE REPORT\*

A. W. ROTH, M. D.  
TULSA

This case of melanosarcoma of the choroid is being reported because all typical and unusual cases should be on record and not that there is any thing especially new.

In this report, the location of the tumor and the age of the patient are to be noted. These cases generally occur between the ages of forty and sixty and are extremely rare in earlier life. Though in the 1923 Ophthalmic Year Book, Dr. Suger reports a case of a boy fourteen years old with melanosarcoma. This condition occurring in the older subjects about once in every three thousand pathological cases.

Sarcomata of the choroid generally develop primarily, though it may be secondary, developing in the external layers which contain the large and medium sized vessels. As the growth increases it pushes the retina forward and detachment follows.

Four stages are noted in the development of this condition.

The first or quiescent stage causes very little inconvenience in the beginning but later, impaired vision and a defective field are noted. At this time the ophthalmoscope reveals a detachment of the retina at the point of the tumor. Externally the eye appears normal.

In the second stage there is increased tension and the eye presents the appearance of inflammatory glaucoma, pain now being present.

During the third stage the tumor makes its appearance on the outside, while the fourth stage is noted by the development of metastatic modules in other internal organs.

At the present time very few cases pass

through the second stage as most of them are recognized and cared for during the earlier period.

The prognosis is always bad and even though there is no extra ocular evidence of the infection in the orbit at the time of operation, it is impossible to tell if the infection has been carried to some other organ or tissue.

On November 20th, 1923, LeRoy Mc. presented himself for examination giving the following history: White, school boy, age 14. Has had measles, whooping cough and chicken pox, with these exceptions has always been well. Father and mother and three sisters, all living and well.

One year ago noticed blurring of vision of right eye, growing progressively worse until July when he became blind following a blow on the eye while boxing.

In the first part of October he began having occasional sharp pains.

The physical examination showed a splendidly developed boy of large stature in apparently perfect health, except that the pupil of the right eye was dilated and a greyish white membrane presenting back of the iris which could be clearly seen with the unaided eye.

The examination of the eye revealed the iris bulging forward, the anterior chamber very shallow, the cornea clear and the conjunctive free from inflammation. The lens could not be seen against the retina which was pushed forward. The tension was slightly above normal.

With a loupe or ophthalmoscope an inflamed shape with two large vessels passing over, one on either side of the apex of the cone, could be seen on the nasal side at the juncture of mass about 4 m. m. in diameter, conical in the superior and inferior quadrants far back in the posterior chamber. The detached retina completely obstructed any view back of the lens. The transilluminator gave no apparent shadow. The Wassermann was negative.

The case was diagnosed Interocular Tumor with complete detachment of the retina.

Immediate operation was urged but not until December 26th was the eye removed and as is always best in such a condition, taking as much of the nerve as possible. There was no evidence found of any inflammation in the tissue of the orbit.

The space between the choroid and the retina was filled with a serous fluid, no evi-

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dence of hemorrhage was present. The tumor had pushed the detached retina up along the side of the ciliary body until the mass could be seen in the posterior chamber.

The eye was sent to the Laboratory and the report came back as follows:

"Tissue: Eye ball showing tumor mass in posterior chamber. Microscopic: A very cellular growth, apparently arising from choroid coat of the eye and showing many cells with chromatic nuclei, is noted. There are many cells loaded with melanotic pigment seen throughout the mass. Pathological Diagnosis: A small spindle cell melanosarcoma of the choroid."

The tumor had produced sufficient inflammation one year ago to disturb the retina and interfere with the function of the ciliary body which produced the blurring. The blow evidently hastened the complete retinal detachment which was a fortunate thing for the boy, because it brought him under observation during the first stage of the disease, which resulted in the early removal of the eye and a more hopeful prognosis.

The diagnosis in this case of Interocular Tumor was easy because the lesion was so clearly seen. Its first appearance strongly suggested retinal detachment. In the six weeks that it was coming to operation after the examination, the color of the mass changed to a much darker hue. Had the tumor been situated farther back, it would not have been possible to distinguish it with the ophthalmoscope as the retina so completely filled the pupillary space.

Radium or x-ray treatment of the socket has been urged as an extra precaution, but we have not succeeded in getting the patient to consent.

In the early stage, a large individual tubercle may be confused with sarcoma of the choroid but in that instance you have the tubercular history and upon close examination will very likely find other very small tubercles.

## CATARACT EXTRACTION—WHO?—WHEN?—AND HOW?

C. B. BARKER, M. D.  
GUTHRIE

The operative treatment of cataract is very fascinating and should give the most brilliant results of any procedure in ophthalmology.

If the extraction is conducted with the same degree of precaution and skill as the person

who handles T. N. T., there would be fewer methods and not as many eyes sacrificed by this operation.

Unfortunately the patient carries the burden, leaving the operator with a free hand, and he blames the patient for nearly every failure, when it is often due to his negligence and poor technique.

This skill and technique can only be acquired by experience and team work and the patient is part of the team. You cannot learn to swim by standing on the bank, yet, many of our specialists feel competent and have only witnessed the operation a few times.

Our famous Brônchosopist has rightly said "That a peck of peanuts should be removed from a mannikin before attempting to remove one from a patient." Likewise a great many animal eyes are required to develop and maintain a cataract technique.

The game of jack straws, using an iris forcep and a box of matches is the best practice for developing a sure, steady hand. This may seem simple, yet how many of us do it? We have all seen the time when we would pay the price for a sure hand for only ten minutes, but they are not on the market.

After the patient is prepared, it is a mechanical procedure and why not be as skillful as a successful barber, who must have a steady, trained hand?

This procedure consists of parts of that, used in seven infirmaries, and the welfare of the patient is considered in every step, and it has given me very satisfactory results.

All Ophthalmologists who do the various methods such as Suction, Intracapsular and Extraction by pressing fingers on lids, have a set of instruments, similar to those used in this outline, in readiness to be used when the other methods fail—which proves it is the best method for universal use.

The selection of the patient is governed by a general and a special examination. The general examination should cover his physical and mental condition. In the special examination careful observation should be made as to kind of cataract, perception, projection, tension and reaction of the pupil.

General and local infection are preeminent. The general or focal infection should be eliminated. I know I have saved three eyes by removing a tooth root, weeks after the extraction. Local infection is governed by culture and controlled by (1-10,000) bichloride of mercury solution and  $\frac{1}{4}\%$  zinc solution used a few days before the operation. At the time of the operation, wash face and lids with soap and water, followed by alcohol

to thoroughly cleanse face, lids and lashes, and instill into eye one hour before operation two drops of a 1% silver nitrate.

On various occasions I have found the unoperated eye infected, after a three day bandage, and no pus in the operated eye, the only difference being that silver nitrate was used in the latter. Therefore, I am convinced of the value of silver nitrate in intraocular operations.

Spasms of the Orbicularis can be eliminated during and after the operation by injecting one cubic centimeter of one per cent Procaine in each lid, near the outer canthus. A few drops of a four per cent cocaine, with adrenalin is the best local anesthetic.

The patient should be operated while lying in his bed and kept quiet on back for forty-eight hours following the operation. Especially constructed beds with removable headpieces are preferable for cataract work.

The vitreous may be saved in many cases, by using a lid hook instead of a speculum and never tell the patient to look downward, the latter can be demonstrated when doing an evisceration, under local anesthesia. After the cornea is removed tell the patient to look down and the contents of the eye will protrude more than in any other gaze.

A simple extraction is preferable in suitable cases, as hard or mature cataracts, because the dazzling and light are not so troublesome with a small mobile pupil, and they can see better without glasses, and it matches the other eye. Glaucoma and Iritis do not follow a simple extraction as often as with a combined. However, a preliminary iridectomy should be done in all immature and complicated cataracts and those having a soft cortex, and in doing an iridectomy a small incision should be made in the clear cornea at the limbus, so the resulting scar will not interfere with the large conjunctival flap to be made later. The conjunctival flap seals the ocular wound, and the anterior chamber refills in twenty-four to forty-eight hours.

The advantages of doing a two step operation are: Gaining the patient's confidence and co-operation and dividing the traumatism, also eliminating the troublesome hemorrhage which sometimes accompanies an iridectomy on old people, thereby simplifying and leaving a clear field for the extraction later. If the patient has only *one* eye, most of us favor a preliminary Iridectomy: Therefore, why not give every eye an equal chance?

The anterior capsule should be removed

with forceps, which prevents a secondary cataract and only slight pressure is required for delivery.

A common cause of delayed healing and failure is the leaving of transparent cortical material and iris between the lips of the wound and under the conjunctival flap. This is easily prevented by the proper use of the spatula.

The lids should be closed and sealed by a thin layer of wet cotton, so thin, that the position of the lids can be seen through the cotton, then covered with dry cotton and a double bandage protected by a black cardboard shield.

Every cataract rendering an eye unserviceable, should be removed by discission or extraction.

If the vision in the fellow eye is normal, the patient will not get binocular, single vision, yet, some can wear their correction without producing diplopia. However, with or without glasses, the patient gets valuable indirect vision, thereby preventing retinal deterioration, and often prevents strabismus of the affected eye.

Many cases have binocular, single vision following a double extraction.

This occurs in those cases where vision fails about the same in both eyes, simultaneously, before operation, and both eyes operated concurrently.

Most patients require two pairs of glasses or bifocals, the latter being preferred; however, I have had two cases whose near point was ten inches, making it possible for them to see far and near with the distant correction, which is contrary to all theories of accommodation.

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## THE STATE LABORATORY

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FROM THE DEPARTMENT OF PUBLIC  
HEALTH, STATE OF OKLAHOMA

CARL PUCKETT, M.D., Commissioner

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The Laboratory is a splendidly equipped institution, under the direction of the State Department of Public Health, and supervised by a physician, as State Bacteriologist, associated with him as assistants are technicians who have had thorough training in all forms of diagnostic laboratory work.

The facilities of the Laboratories are designed primarily to give prompt assistance to health officers and physicians in the diagnosis and control of communicable diseases



and to provide laboratory service for all persons in the State for whom such service is not otherwise available. As a criterion of the patient's ability to pay, the physicians should accept whether or not they are receiving compensation for their services.

This laboratory is not in competition with the private laboratories of the State as there is no charge for any examination made. Only those tests that have a bearing on public health are attempted, therefore, physicians are urged to send work that belongs strictly to private practice of medicine to the commercial laboratories.

There are 2,065 practicing physicians in the State of Oklahoma and it stands to reason that there is not a practitioner who does not have a need for the laboratory as often as once each week, at least, the use of which would be legitimate in every respect, and a correct diagnosis would be arrived at in a greater percent of cases.

The State Chemist has his office in the Laboratory and is equipped to make examinations to assist the Food and Drug Commissioner in preventing the sale of unlawful preparations of food and drugs.

All public water supplies should be passed on by the Laboratory and all water used by interstate carriers must be approved by the Laboratory before being accepted.

Plans for making wells and cisterns sanitary are furnished free of charge to citizens by the Sanitary Engineer, who has his office in the Laboratory.

Only methods approved by the U. S. Public Health Service are used in making the different tests in the Laboratory.

Address all communications to State Laboratory, P. O. Box 1237, Oklahoma City, Oklahoma. H. C. Ricks, M. D. Director.

## BUSINESS IN MEDICINE

ARTHUR L. STOCKS, M. D.

### MUSKOGEE

The Muskogee Medical Society has adopted a method of Credit rating, which we believe will not only be the means of eliminating Medical dead beats, but will put the profession on a higher business basis than it now occupies in the minds of many.

The correspondence below, to our members, will give an idea of the plan and if it has any merit, use it.

Dear Doctor:—

At the last meeting of the Medical Society, the Secretary was instructed to crystalize into effectiveness, the idea of a credit bureau in connection with the Society. Of course this cannot be a great success without the active co-operation of the Members.

It will be the purpose of the Bureau to furnish the physicians with credit information, for instance, that John Doe, of 140 Blank Street, owes say, one, two, three, four, five or six doctors, as the case may be, and he then can use his own judgment as to terms of service requested.

You are asked to make out a list of delinquents, with amounts owing, and please do not include any that are in controversy; sign your name to the list, and mail to the Secretary, keeping a duplicate in your own files.

The Society voted that \$3.00, should accompany the list to bear the necessary expense of printing, publicity, etc., and the further cost will be prorated as near as possible to benefits received.

It is believed that when the general public are taught to appreciate that a Doctor's bill should be paid as promptly as a Merchant's, much that is slow and often times lost altogether, will be saved to the Doctor.

Again, the Credit Bureau, if you desire, will correspond with the delinquent in regards to the debt, if you wish this service, in addition to the listing, kindly indicate. A letter from the Society's Credit Bureau will be given more attention and will be more effective, and cost no more than from yourself.

From a Scientific standpoint, our Association has proved beneficial to those who have availed themselves of it, and none would want it disbanded; now here is an opportunity for it to prove helpful on the business side of Medicine.

Whether you do or do not participate, you necessarily are going to profit by the activities of this Bureau, and let me urge, do not be counted with those,

"Who reap where they have not sown  
And gather where they have not strewn."

Please act as promptly in this matter as you can.

Truly yours,

A. L. STOCKS,

Sec'y. Muskogee County Medical Society.

Doctor: Here is a sample first letter. If you have a better one, fire it over. Understand, the idea is, not only to have them pay what is already owing, but to cultivate the idea of prompt pay.

Muskogee, Oklahoma,

February 26, 1925.

Dear Sir:

The advancement in Medical Science has made it possible for a physician to render a much more valuable service than ever before.

With this advancement has come a heavier burden to the physician in the way of expenses, so that the slipshod methods of yesterday will not avail if the Doctor is to render the best service, and of course you don't want less.

To this end, a Credit Bureau has been established in connection with the Medical Association. In this way, the Doctor can devote his thought and attention to sick folks without the annoyance of looking after over-due accounts.

Our records show that you owe Dr. B., Dr. C., Dr. D., \$000.00. Before making a report to the Members of the Society, as to your rating, it is urged that you see these Doctors, who have served you and make some arrangements to pay them.

Please do this promptly.

Truly yours,

Sec'y. Credit Bureau.

# THE JOURNAL

OF THE

## Oklahoma State Medical Association

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DR. CLAUDE A. THOMPSON..... Editor-in-Chief  
308 Barnes Building, Muskogee, Okla.  
DR. P. P. NESBITT..... Associate Editor  
814 Surety Building, Muskogee, Okla.

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Local news of possible interest to the medical profession  
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### EDITORIAL

## TAKING THE BOARD OF HEALTH "OUT OF POLITICS".

This, in substance, is the aim of Senate Bill 322, and the proponents of that proposed legislation. Briefly it proposes to permit the Governor, instead of naming his choice, unhampered by suggestions from others, a one man executive solely responsible to the Governor, who in turn is responsible to the people; to name a board of five members, composed of two physicians, one dentist, one sanitary civil engineer, and one citizen of the State, not a member of any of the above named professions. This board shall have the power to select a secretary, not a mem-

ber of the board, who shall be ex-officio, a member, and, he shall in addition to his duties as secretary of the board, be the State Commissioner of Health. The Board members shall receive no compensation, except actual expenses, etc.

This proposal is utterly futile to meet the situation. Competence and goodness cannot be legislated into anything, and the more we confuse the situation by attempting to surround it with fine spun theories, the worse off we shall be. In the first place, if we accept the meaning of the word politics for exactly what it is and what it means we do not wish to take the board "out of politics". "Politics" means the science of government, and doctors certainly are more fitted to indulge in the practical and proper application of that science than most men whom we find today thrusting themselves forward, assuming control of the most sacred and technical things, rushing in "where angels dare not tread." The fact that the doctor as a rule eschews politics, or what he imagines is politics, has nothing to do with this matter. He spurns, and rightly so, dishonestly in politics or does not feel an interest and proper pride in the accomplishment of the task political in an honest efficient manner. The Medical profession of Oklahoma has reason to complain of the indifferent enforcement, often no enforcement at all, of many sensible sanitary laws and promulgated regulations, which have been dictated by common sense. In one county we have observed the spectacle of rigid and common-sense application of laws and regulations pertaining to the public health, while across the line in adjoining counties, the law was not only not enforced but often openly flouted. It is to our shame that in many such instances this disregard arose not from any particular opposition to the law itself, for ours are good laws, just as they stand, but from hostility, either personal or professional to the enforcing officer. This exhibition cannot be eradicated by appointing any number of long-distance, patriotic board members, any more than boot-legging, thievery, or other violations of the law can be reduced. There is only one remedy and that is a straight from the shoulder fight for what is right, regardless of who the offender may be.

We do not believe this proposed change to be necessary or that it would accomplish an iota of good. It is unheard of in our system of prevailing government. It is asking the President to select his cabinet from the nominations handed him, then holding him responsible for their acts. The President se-



lects his own cabinet or executives, holds them responsible to himself and in turn stands or falls by their acts. This is as it should be and is likely to remain so for a long time.

We do not believe this law will be enacted or that it will meet the approval of the Governor or the people if it is enacted.

### LEGAL TESTIMONY FROM VETERANS BUREAU ATTACHES

A decision of interest to every physician connected with Veterans Bureau work has been recently promulgated, and its noting here may be of future use.

A Veteran's Bureau physician summoned to testify in a criminal action against a Bureau beneficiary objected to so testifying on the grounds of privilege. The Director of the Bureau decided that though the World War Act makes no mention of disclosure of facts, but relates only to files, records etc. General Orders promulgated provide that no information in reference to transactions of an official character in the Bureau shall be communicated to any person not authorized to receive same. So, if a physician is summoned, he should of course answer the subpoena, but he should claim the privilege as to information acquired by him officially. He should also, if prohibited by state laws from testifying (divulging privileged communications), claim that privilege also.

It was also held that in case a court overruled such objections the physician, of course, must testify, but to matters within his personal knowledge only, and not to matters which are shown only by the records of the Bureau.

Another decision notes the World War Act to the effect that the Director only is clothed with power to permit Bureau files to be produced in court. No person may produce such files in any court unless especially authorized by the Director.

### *Editorial Notes—Personal and General*

CREEK COUNTY MEDICAL SOCIETY met at Bristow February 13, at the Roland Hotel, with a good attendance.

Dr. and Mrs. V. L. McPHERSON, Boswell, are spending eight weeks in New Orleans, where the doctor is attending the poly-clinics.

DR. EARL D. McBRIDE, Oklahoma City, held a crippled children's clinic at Clinton on February 7, under the auspices of the Clinton Rotarians.

DR. C. A. HOWELL, Oklahoma City, is a candidate for a place on the Oklahoma City School Board, on a platform to take the schools out of Politics.

THE OKLAHOMA CENTRAL MEDICAL ASSOCIATION recently re-organized at Enid, will meet again at Enid on April 2; Dr. Paul Champlin, Enid, is Secretary.

OSAGE COUNTY MEDICAL SOCIETY met at Pawhuska February 2 at the Municipal Hospital. Dr. Fred A. Glass, Tulsa, being the principal speaker of the evening.

THE STATE NURSES ASSOCIATION, first district, met at El Reno February 5, Drs. T. M. Aderhold, and H. C. Brown, both of El Reno, being the principal speakers.

DR. R. D. WILLIAMS, Idabel, while riding in his car with his wife and children, was struck by a truck; luckily only the doctor was slightly injured, while his car was demolished.

DR. M. H. NEWMAN, Oklahoma City, has removed to Los Angeles, California, where he has opened offices in Suite 303, Financial Center Bldg., for the practice of obstetrics and gynecology.

PONCA CITY HOSPITAL will be operated by the Sisters of St. Joseph, a contract having been signed with the Ponca City Chamber of Commerce; the Sisters' services being donated to the city free of charge.

THE COUNTY PUBLIC HEALTH ASSOCIATION of Washington County took care of more than 50 crippled children at a clinic recently held there under the direction of Drs. Earl D. McBride and A. D. Young of Oklahoma City.

THE AMERICAN UROLOGICAL ASSOCIATION, which is our latest national urological organization, meets in St. Louis on May 21, 22, and 23, 1925, with headquarters at the Chase Hotel, the mornings of these dates being devoted to clinics at the various hospitals, and the afternoons to the scientific sessions in the ball-room of the hotel.

THE AMERICAN COLLEGE OF SURGEONS district convention for 1926 will meet at Tulsa, it was decided at the Little Rock meeting in February; the district consists of the states of Oklahoma, Arkansas, Texas and Missouri. Dr. LeRoy D. Long, Oklahoma City, was elected President, Dr. Fred S. Clinton, Tulsa, Secretary, and Dr. Horace Reed, Oklahoma City, Councilor, for the district.

DR. J. E. FARBER, Cordell, made the pilgrimage with the Imperial Potentate of all the Shrines of the United States of America, James E. Chandler, to the Shrine at New Orleans and the Canal Zone. They visited Cuba en route, and Costa Rica on the return trip. Dr. Farber says Palm beach clothes and Panama hats were the usual attire in Central America even in January. Dr. Farber was a member of the State Board of Medical Examiners for five years.

THE NATIONAL BOARD OF MEDICAL EXAMINERS, through Dr. J. S. Rodman, Secretary, announces that three additional states: Michigan, Oklahoma, and Wyoming have notified the Board that henceforth they will accept its certificates as qualifying physicians to practice medicine in those states; this makes a total of 31 states which now recognize the Board's certificate granted to candidates passing its uniform examinations, in addition to the territory of Porto Rica, the Military Reservation of the Canal Zone, and England and Scotland.

HUGHES COUNTY MEDICAL SOCIETY met in regular session February 24th, at Holdenville; Senate bill No. 322 was discussed thoroughly, and the following resolution was passed, with a request that a copy thereof be sent to each member of the Legislative Committee and the President and Secretary of the State Medical Association. The resolution follows: That we go on record as against the bill for the following reasons: Instead of taking the State Health Department out of politics it puts it deeper in and makes more expense for the State.

STEPHENS COUNTY MEDICAL SOCIETY had an interesting meeting in January at Duncan, the attendance being greater than at any meeting during the preceeding year. An effort is being made to get every eligible doctor in the county into the Society, and success is promised. A program, consisting of case reports and discussions was had, with Dr. McMahan reporting three cases of suppurative otitis media with brain complications, and one case of perforated wound of the nose with brain complications. Dr. Long reported a case of adenocarcinoma of the omentum; Dr. Harrison of Hirschsprung's disease; Dr. Chumley a case of corrosive sublimate poisoning.

THE WESTERN PHYSIOTHERAPY ASSOCIATION.—Arrangements are all completed for the Seventh Annual meeting of the Association, which will be held at the Little Theatre, Kansas City, Missouri, Thursday and Friday, April 16 and 17, under the presidency of Dr. L. A. Marty of Kansas City. A number of men of national reputation will be present to address the members. The medical department of U. S. A. will also be represented. Dr. T. Howard Plank of Chicago will hold a clinic at the General Hospital on the afternoon of April 16. Members of the Association desiring to present cases for diagnosis or operation may make arrangements with the secretary for these cases to have the personal attention of Dr. Plank. Full information may be obtained by addressing the secretary, Charles Wood Fassett, M. D., 115 East 31st Street, Kansas City, Missouri.

### **OBSTETRICS and PEDIATRICS**

Edited by Carroll M. Pounders, M. D.  
532 Liberty National Building, Oklahoma City

**HUMAN MILK, ITS COMMERCIAL PRODUCTION AND DISTRIBUTION.**—Raymond Hoobler, M.D., J.A.M.A., January 17, 1925.

The commercial production and distribution of human milk is no longer an experimental proposition, but is becoming a practical industry in sev-

### **DOCTOR THOMAS S. WILLIAMS**

Died at the Williams Hospital, Stilwell, Oklahoma, on February 19, 1925, Dr. Thomas S. Williams. He was born at Hampshire, Tennessee, February 7, 1864, and graduated with the degree of B.S., from the Sante Fe Institute, Tennessee, in 1887, later attending the Baylor University College of Medicine, at which he received the Dr. Rosser Gold Medal, graduating on May 15, 1905. Dr. Williams received his license to practice in 1906, and practiced his profession for 5 years at Cameron, Texas, before locating at Stilwell. Dr. Williams was a charter member of the Adair County Medical Society, a member of the State Association and the A.M.A. His death closes a useful life spent in the service of his fellow men, and is keenly felt by his friends and colleagues.

eral places. It has been collected and utilized for several years, but at one time the expense and difficulty of collecting it was so great as to make it practically out of the question except under very exceptional circumstances. The process has been so well systematized that the mothers are induced to take it up solely for commercial reasons, it being no longer necessary to appeal to their sentiment. During the past eight years the Detroit Bureau quarts. The maximum price charged for the milk is 30 cents an ounce. For people unable to pay this much, the price is scaled down. Several women have raised as many as three consecutive babies on milk obtained through this organization. A sufficient number of productive mothers are kept on the payroll to supply the fluctuating demand. The excess is distributed free of charge to hospitals caring for sick and premature infants. The requirements that must be met by a producer are: (1) must be healthy have a negative Wassermann reaction and be free of tuberculosis; (2) have clean personal habits; (3) live in a clean home; (4) nurse her own baby up to 8 months; (5) express milk at least twice daily; (6) Keep milk on ice until delivered and (7) supply at least 16 ounces daily. The remarkable statement is made that one woman made more than \$3,500 in a little over 14 months time selling her milk. There are many mothers who are natural milk producers. It is believed that among these there will grow up in each community an ideal occupation for all who are willing to devote themselves to this lucrative employment. As is pointed out, it does not interfere in any way with their home duties.

**ASTHENIC CHILDREN.**—Isaac A. Abt., M.D., Chicago, Illinois.

Dr. Abt discusses a group of children in whom the so-called asthenic constitution is an outstanding symptom complex. These children are usually thin and above the average height. The thorax is shallow, narrow and long with wide intercostal spaces. The epigastric and vertebral angles are acute. The upper and lower thoracic apertures are narrow. The clavicles are prominent and the scapulae project like wings. They



appear in poor nutrition and show weak muscular development. They look younger than their actual age. The face is small in proportion to the oblong skull—the facial bones being small and delicate. The palate is narrow and high, the neck is pale and thin with a slight panniculus. The heart area of dullness is small. There may be vasomotor instability, flushed, pale and cold extremities and frequent dizziness. The appetite is frequently impaired and constipation is the rule. There is gastropnoxis and enteropnoxis. These children are often above the average intellectually, but may concentrate poorly. They are easily distracted and may progress poorly in school. They may be very quiet in behavior. They have a serious expression, show little interest in their surroundings and are morbidly sensitive. The temperature is labile. Exercise may lead to elevation or reduction.

These symptoms may be prominent during the school age and adolescent life and disappear with advancing years. It is due to a constitutional disposition and, as a rule, tends to remain during the life of the individual.

The indications for treatment is to strengthen a weak organism and to prevent complications with various diseases. There is no specific treatment. The child should be hardened and developed by the proper exercises and there should be the proper training and formation of good mental and physical habits. In fact the usual measures used to combat malnutrition are employed.

#### DOES REMOVAL OF TONSILS PROTECT ONE AGAINST OTHER DISEASES?—Health News and Views, February, 1925.

Is the person who has had his tonsils removed less likely to contract diphtheria or scarlet fever?

To answer this question, Dr. James A. Doull of the Johns Hopkins school of hygiene recently made tests of school children in certain wards of Baltimore.

He found that children whose tonsils had been removed were distinctly less liable to contract diphtheria than other children of corresponding age and similar environmental conditions.

However, he could find no such relationship between removal of tonsils and scarlet fever, which tended to revive the theory that this disease is like diphtheria in that it is primarily a local infection in which the general symptoms are caused by a toxin produced in the throat.

Out of 224 cases of diphtheria that had occurred among the Baltimore school children examined, only two children had had their tonsils removed, while in 193 cases of scarlet fever, 19 were found to have had tonsil operations.

Dr. Doull, in making his report, concludes:

"In the area studied, children who had their tonsils removed are distinctly less liable to diphtheria than those who have not had the operation performed; whereas in scarlet fever, no significant difference is shown. The relationship which removal of tonsils bear to either diphtheria or scarlet fever requires more observation in other localities."

#### SIGNIFICANCE OF LYMPHANGITIS OCCURRING WITH CUTANEOUS TUBERCULIN TESTS IN CHILDREN.—Frederick Eberson, M. B., American Journal of Diseases of Children, January, 1925.

In doing routine cutaneous tuberculin tests it has been noticed that there occurs, in connection with certain positive reactions, a lymphangitis. Within 24 to 48 hours a streak of lymphangitis develops as an extension along the lymph channels of the forearm. At times this is quite severe and is not necessarily associated with an equally violent local reaction to the tuberculin. The red streak measures from 2 to 10 cm. or more in length and varies from a limited lateral or medial extension of an indurated and erythematous area to that of an infiltrated lymphogenous band, coursing upward on the arm and beyond the antecubital space to the axilla. Adjacent lymph glands become indurated and definitely palpable and a rise in temperature of one or more degrees occurs. The lymphangitis fades usually within seventy-two hours and disappears without treatment. The author has found from his investigations that this kind of reaction is definitely associated with tuberculosis with an active focus of glandular origin. In a series of cases in adults this same condition was found to be true. Roentgenologic studies demonstrated in 100 per cent of the cases a complete correlation between this type of reaction and tuberculous foci in the hilum or intrapulmonary glands. Several of the cases showed cervical gland involvement.

#### BACTERIOLOGY and PATHOLOGY

Edited by Wm. H. Bailey, A.B., M.D.  
Wesley Hospital, Oklahoma City

#### THE EXPERIMENTAL PATHOLOGY OF CANCER.—Dr. Francis Carter Wood, New York Journal of A.M.A., January 3, 1925.

The author discusses in a most entertaining and scientific manner the present status of experimental cancer research. He takes up the various methods and conditions of transplantation of tumors in the experimental laboratory animals. These experiments prove that true growth is only to be obtained when the transplant is homologous, that is, rat tumors must be transplanted into rats, and mouse tumors into mice. These transplanted tumors are not exactly similar in all their particulars to the primary tumors in the original animal but many of their morphologic and biologic qualities are so nearly similar that their study is of the greatest importance. He likens their development in the new host to the growth of bacteria on a culture tube the tissues of the body of the host, acting as the culture medium. When we realize the great importance to the study of infectious diseases that has been given by investigations through bacteriologic research we can visualize the possibilities of cancer research. The author states that many of the theories advanced and the deductions made from animal experimentation in the past are of very little real value because the experiments were not conducted on a large enough scale nor repeated a sufficient number of times. He writes in detail of only a few of the many problems on which

the investigators are working. Referring to the spontaneous recession of tumors, the author says that so far no means has been found of artificially influencing the regression of transplanted or primary tumors, except its physical destruction by radiation or heat. Such methods as the treatment of tumors by injection of killed cancer material, an immune serum, a drug, or chemical and the various bacterins, have all been proven of no value, when tested by a sufficiently large enough series. If cancer research has destroyed all the high hopes of cure of 20 years ago, it has in addition proven many interesting facts in the biology of tumors. The author states that research has shown that it is not an especially dangerous procedure to remove a portion of a tumor, surgically for diagnostic purposes. On the other hand physiotherapeutic treatment, as repeated massage of a tumor will greatly increase the degree of metastasis. The actual radiation dosage for certain tumors has been definitely established. It has been found that no matter what the filtration or the wave length of the x-ray or radium emanation that kills the tumor cells, the same number of human skin erythema doses is necessary. They have found that pre-operative irradiation did not close the lymphatics at least within a period of 2-3 weeks. The active destructive action of the body tissues, either local or general is now thought to be of no value in protecting the individual. Food supply of the tumor cells seems to be a deciding factor in the rapidity of its growth. No inhibitory or destructive effect is now thought to be possessed by the blood, lymphocytes or the leucocytes.

As to the causation of tumors the author states that it is definitely possible to cause tar-cancer by repeatedly painting certain animals with tar, a certain parasite will produce cancer in the stomach of susceptible rats, carcinoma of the liver can be produced by irritation of the cysts in that organ of a certain type worm in cats.

In his closing paragraph the author says that in the last 20 years we have learned more about the nature of cancer and its causations than in the preceding 20 centuries of recorded medical history.

**APPENDICITIS.**—H. J. McKenna, M.D., Kansas City, Missouri. K. C. Clin. Soc. Bul., Volume 1, Number 3, January, 1925.

In a review of approximately 200 cases of appendicitis both acute and chronic the following observations were made.

Pain of some degree is a constant symptom in all cases of appendicitis.

Blood count is not a reliable indication as to the pathology to be found in the appendix or peritoneum. It should not be relied upon as to whether an acute case of appendicitis is one for immediate operation or one which can be held over to be operated at a later date e. g., from evening until the next morning.

Acute cases operated on the day of attack, 94 per cent were free of pus; these cases spent an average of 11 days in the hospital. Acute cases operated on the second day after attack, 76 per cent showed pus; these spent an average of 18 days in the hospital.

The pulse seems a more reliable informant as to the pathology to be found than the blood count. Cases with pulse of 100 or above, 44 per cent had pus and 56 per cent no pus. Cases with

pulse below 100, 84 per cent had no pus and 16 per cent had pus. Of the cases with pulse of 100 or more, and showing no pus at operation, 70 per cent were females and 50 per cent were under 20 years old.

Chills have a serious significance in acute appendicitis and with a history of chills the case becomes one for immediate operation regardless of the urgency of the other symptoms. Drainage is much too frequent.

**BLOOD LIPOIDS IN DIABETES.**—Journal of A. M. A., January 31, 1925.

The consideration of the pathology and also the treatment of diabetes is not complete in the light of present-day information without some reference to the possibility of a faulty metabolism of fats as well as a perverted use of carbohydrates in the organism.

"With an excess of fat," Joslin has written, "diabetes begins, and from an excess of fats diabetics die." The blood fat is above normal with a consistency equal to the changes in blood sugar in diabetes. Strikingly high blood fats are, however, infrequent. Gray has observed that the longer the duration of diabetes before examination the lower the blood fat, presumably because only those patients live long who have a low fat content; that is, mild diabetes.

Until recently it was so customary for patients with diabetes to depend on large quantities of fat in their diets to furnish sufficient energy to the body that one can readily understand how the view gained credence that lipemia in such persons is associated largely with the fat intake. Even with such diets, a progressive fall of blood fat under treatment may be noted. Indeed, Gray's data are already interpreted by him to demonstrate the rule that progressively each group with a higher blood fat level is characterized by a distinctly shorter life expectancy. The knowledge of the content of blood fat may aid materially in the diagnosis of renal glycosuria, for the latter may be ruled out whenever there is a coincident lipemia of excessive proportions.

**SKIN REACTIONS WITH GONOCOCCUS FILTRATES (Toxin?)**—Russell D. Herrold, M. D., Chicago, Journal of A.M.A., January 31, 1925.

It has been generally held that the toxicity of the gonococcus is due to the so-called endotoxins that are set free only after the death of the organism. Dr. Christmas reported that he was able to obtain a true exotoxin in cultures by growing the gonococcus in serum broth medium. Other workers report that they have obtained, from autolysed extracts of the gonococcus, a toxic substance that answers all the requirements of Dr. Christmas' toxin; and they have attributed the results of Dr. Christmas to the liberation of endotoxin by the rapid autolysis of the gonococcus. Whatever the classification or source of the toxic products, the facts remain that gonococcus vaccines are decidedly more toxic than many other bacterial vaccines in the same dosage; and that there are often manifestations during the diseases which it seems reasonable to attribute to toxin rather than to the organism alone. These are notably the skin lesions, systemic conjunctivitis, iritis, keratitis, myositis, tenosynovitis, and



certain types of arthritis, in all of which it may be impossible to demonstrate gonococci.

Dr. Herrold has obtained a substance in the filtrates of broth cultures that has given a skin reaction up to a dilution of 1:100 when injected intracutaneously in the quantity of 0.1 cc in persons who have never had gonococcus infections, after the method of the Schick and Dick tests. The results of the tests on fifty patients are tabulated. It is noted that uniform reactions appeared in the group that had never had gonococcus infection. The majority of persons with active infections of longer than three weeks gave no reaction, but frequently those with infection of less than three weeks gave reactions. When the infection was no longer present, a reaction was again more often obtained, especially if longer than one year since the active infection.

The serum of a patient who gave a negative reaction neutralized in a quantity of 1 cc., 100 skin test units; that is to say, 0.1 c.c. of the toxin filtrate.

It would seem from the results so far that this test may be of diagnostic value, and possibly also an aid in the control and development of methods of treatment.

### ORTHOPAEDIC SURGERY

Edited by Earl D. McBride, M. D.  
1006 First Nat'l. Bank Bldg. Oklahoma City

**UNCOMPLICATED DISLOCATION OF THE INFERIOR RADIO-ULNAR JOINT.**—Alexander Gibson, F.R.C.S., (Eng.) Winnipeg. *The Journal of Bone and Joint Surgery*, Volume VII, No. 1, January, 1925.

The author states that several factors contribute to the security of the joint. Perhaps the strongest of all the joints are those that are ligamentously strong. That is why a dislocation of these joints is rare. The inferior radio-ulnar articulation is such a joint and its record is no exception to the general statement made. In looking through the literature, one is struck by the frequency of the remark that few surgeons have seen more than one case.

The lesion is generally referred to as a dislocation of the head of the ulna. This is really a mistake in terminology. It is the ulna which is fixed. It is the lower extremity of the radius which undergoes displacement. But not only is the lower end of the radius more massive than the lower end of the ulna; it carries with it also the whole carpus and hand, so that it appears as if the ulna head had undergone the displacement noted. Hence it is customary, although inexact, to accept the erroneous designation.

At first sight it would appear that injury to this joint might be common. It is placed at right angles to the main axis of the limb. The muscles which are in close relation to it are for the most part tendinous in this region and they run on the whole longitudinally so that they can have no direct supporting action. Posteriorly, the slender tendons of the extensor digiti quinti proprius is in direct relation to the joint. The pronator quadratus is close to the joint anteriorly, and its fibers no doubt help to strengthen the articulations against direct distraction. Two of these supinate, viz., the biceps and the supinator (brevis). Pronation is carried out by the pronator teres and

the pronator quadratus. The supinators are more massive than the pronators, but their power is applied more closely to the pivotal axis which passes from the center of the head of the radius to the pit at the base of the styloid process. Hence the moment of the force is not excessively greater, although movement of supination are relatively more powerful than those of pronation. The flexor carpi radialis and palmaris longus assist in pronation; the extensor pollicis insupination; the brachio-radialis assists in either movement. This joint possesses an anterior and posterior ligament, both thin, lax, and comparatively unimportant. By combining rotation at the shoulder joint with radio-ulnar rotation, a range of well over 360 degrees can frequently be secured. The amount of rotation occurring at the radio-ulnar joints themselves is about 135 degrees. In the mid-position the point is most secure. Pronators and supinators act simultaneously to bring about fixation. In extreme pronation or supination either group is contracted to the limit. In either extreme position, security depends essentially on the interarticular disc. If this be itself torn, or its attachments give way, then dislocation of the joint will occur. This condition is most often brought about by direct force upon the forearm with the hand in full supination. Hence the positions of greatest danger are those of full supination and of full pronation. Hence if the point of application of force be in the neighborhood of the styloid process and radius its affect will be at a maximum. It is further noteworthy that in the position of maximum pronation or supination the joint is robbed of one of its best defenses, viz., mobility.

A survey of the literature confirms the theoretical conclusions reached above and suggests a classification of inferior radio-ulnar dislocations.

(I) With fracture.

(II) Without fracture.

Congenital: Madelung's deformity.  
Acquired:

- (a. Forward.
- (1) Traumatic (b. Backward — acute,
- (c. Inward. (?)
- (2) Pathological.

The acute forms may also be classed as recent, old-standing and recurrent.

The interesting point particularly about this dislocation is the frequency of erroneous diagnosis and the technique used in correcting same.

Patient prepared for major operation, general anesthesia, and an attempt to reduce the dislocation by manipulation is always made but most frequently is unsuccessful so open exposure is practically always indicated and a necessity. The incision is made from the dorsal aspect in order to satisfy ones curiosity regarding the condition of the interarticular disc, to investigate the swelling, and attempt to replace the head of the bone. The dorsal incision gives excellent exposure. The triangular ligament is usually found to have been torn away from the ulna while it remains attached to the radius. The technique of the author's personal case was given in detail.

**TUBERCULOSIS OF THE KNEE: IMPORTANCE OF DIAGNOSIS.**—Nathaniel Allison, *Journal A.M.A.*, Septmeber 6, 1924, p. 750.

Tuberculosis of the knee joint is a diagnosis difficult to establish, especially in the early stages of the disease. The diagnostic methods common-

ly in use are dependent on evidence mostly circumstantial in nature. Animal inoculation and pathologic examinations of tissues from the joint are the only accurate means of diagnosis. In cases in which the circumstantial evidence points definitely to tuberculosis, exploratory arthrotomy should be performed to obtain tissue for microscopic study and animal inoculation.

### TUBERCULOSIS

Edited by L. J. Moorman, M. D.  
611 1st Nat'l. Bank Bldg., Oklahoma City

#### THE REHABILITATION OF THE TUBERCULOUS EX-SERVICE MAN.—Walter C. Klotz. *American Review of Tuberculosis*, August, 1924.

Tuberculosis as a war problem was studied from the entrance of this country into the war and adequate plans for its prevention and treatment were made by the Army Medical Corps. The problem of prevention was well met, but it was found impossible to carry out the well laid plans for treatment in the face of popular opinion and sentimentality.

The original plan of treatment was to keep all disabled men in the service until either completely recovered or recovered so far as possible in consideration of the disability. The War Risk Insurance Act provided that hospitalization and medical treatment be provided for all disabled soldiers and it was assumed that the Army and Navy hospitals would furnish this service. They provided beds to meet this emergency. When demobilization started there was a distinct reaction against the war and a resentment of all military discipline. Every man including the officers and men of the Medical Corps wanted to go home and the plans laid in 1917 and 1918 were abandoned because of popular demands.

It was but a short time, however, until there was another reaction demanding hospitalization which the government was obligated to furnish by the War Risk Insurance Act. In response again to popular opinion the United States Public Health Service was utilized to provide this hospitalization as the men did not want to go to the Army hospitals. This service was very inadequately equipped for this vast work, Congress and the country remained apathetic to its repeated appeals for adequate buildings, equipment and funds, and it was not until the spring of 1921 that the first Langley bill was passed and a sufficiently large appropriation made available.

There were at this time three agencies, the Bureau of War Risk Insurance, the Army or Public Health Service and the Federal Board of Vocational Education all trying to look after the same man at the same time. Efficiency was thus impossible. The Veterans Bureau was created in 1921 to combine the duties of the War Risk Insurance Bureau and the Federal Board of Vocational Education, and the hospitals operated by the United States Public Health Service were transferred to the Veterans Bureau in 1921, thus centralizing these activities under one head.

Under the provisions of the War Risk Insurance Act and its amendments all men developing tuberculosis within three years after discharge and a large group volunteering or passed by a draft board who were later rejected by a tuberculosis examining board are entitled to compensation and treatment. The fact that inducement to have a diagnosis of tuberculosis is thus offered, plus a

large probable percentage of error in diagnosis due partly to the effect of frequent criticisms of the individual examiner's judgment, and partly to the lack of physicians with tuberculosis experience, makes the existing figures of little value either as an index of the incidence of tuberculosis among the general population, or of its occurrence in relation to military service.

The greatest difficulties met with both in examining and in treatment were due to the lack of properly trained physicians. While it is fairly easy to train a man to make a satisfactory chest examination, training one to understand tuberculosis in all its clinical, psychosocial, sociological and economic phases is a matter of years. Ambulant patients especially need all that can possibly be given of personality, tact and sympathy as well as medical judgment and knowledge in order to appreciate the need of treatment.

The available figures of results of treatment are of little value as to percentages of permanent arrest or complete rehabilitation owing to the number of men without permission or against advice and the frequent re-admissions, transfers, passes and furloughs.

Closer correlation between medical service and the rehabilitation division is necessary if this is to be done properly. When the patient is discharged from the sanatorium and passes entirely to another organization he frequently breaks down again thru the lack of medical supervision, others coming under a new and less experienced examiner are often re-labeled active for insufficient reasons and unnecessarily re-hospitalization. "Try-out" training centers closely correlated with the hospital where the patient has been treated with close medical supervision are suggested as coming nearest to fulfilling the requirements of sheltered employment with graded work and practical industrial training.

#### A STUDY OF RE-ADMISSION AND RELAPSE OF TUBERCULOSIS PATIENTS IN 200 CONSECUTIVE CASES OF EX-SERVICE MEN RE-ADMITTED TO THE NOVA SCOTIA SANATORIUM.—A. F. Miller. *The American Review of Tuberculosis*, August, 1924.

The figures gathered from a special study of readmissions at the Nova Scotia Sanatorium during 1921 and 1922 are of great interest to all who are trying to care for and re-establish tuberculous patients. The experience here with ex-service men dates since 1916 with some few as civilian patients in 1914 and 1915. The Canadian Board of Pension Commissioners brings each man up for re-examination every six months while he is receiving a pension and refers its tuberculous patients and suspects to the Nova Scotia Sanatorium for examination, especially those who have had treatment there.

Of the 1338 ex-service patients treated at the Nova Scotia Sanatorium, 430 have been re-admitted, 200 of these re-admissions are studied here. The re-admissions are classified first as relapsed 66 or 33% and not relapsed 134 or 67%. All patients showing either extension or activity or both were classified as relapsed. Of the 14 suspects, 3 relapsed. The 2 who were discharged improved came back, 1 minimal, active, 1 moderately advanced, active and 1 who was discharged non-tuberculous came back after 2 years far advanced, active. All of the 11 suspects who did not relapse were discharged improved, 7 were non-



tuberculous and 4 doubtful on re-admission. Three of the 48 minimal relapsed. They were apparently arrested on discharge, 2 minimal, active, and 1 moderately advanced, active, on re-admission. All of the 45 minimal who did not relapse came back with their condition improved or stationary. Forty of the 79 moderately advanced relapsed. The 10 who were discharged arrested were moderately advanced, active, on re-admission. Of the 19 who were quiescent at discharge, 10 were moderately advanced, active, and 9 far advanced, active, on re-admission. Of the 7 improved at discharge 4 came back moderately advanced, active, and 3 far advanced, active. The 39 moderately advanced who did not relapse all showed stationary or improved conditions on re-admission. Twenty of the 23 far advanced relapsed. Eight quiescent, 2 improved and 10 unimproved at discharge all returned far advanced, active. The 3 who were discharged quiescent and did not relapse were still quiescent on re-admission.

It was found that there was an inverse ratio between the length of time spent under treatment and the probability of relapse. This is thought to be due to the fact that military patients, being under no financial stress, do not leave the sanatorium until treatment is completed unless they do so desire. The time of treatment is thus more in direct proportion to the extent of the tuberculous trouble than is the case with civilian patients.

The causes to which the patients attributed their relapse were, "unsuitable work or too long hours, 18; "colds", respiratory and other diseases, 18; insufficient pension, 17; pension too sharply reduced, 5; surgical operations, 4; did not know they had tuberculosis, 2; treatment incomplete, 1; delay in re-treatment, 1; mental condition, 1; no known cause (natural course of disease), 20."

The economic problem is the outstanding one in a study of re-admission and relapse. It is the theory of the Canadian Government to discharge the patient in fairly good condition, able to work three or four hours a day and with a pension for six months or a year sufficient to tide him over the part time period. This does not work out, however, as there are few part time jobs. The ambitious man takes what work he can get, usually full time and often unsuitable, and sooner or later relapses. The sluggish man who has learned to idle under treatment drifts along until time for his pension to be reduced when he must go to work in this soft mental and physical condition and is consequently soon back at the sanatorium either with a real relapse or with the hope of further care and pension.

Effort has been made to provide vocational training for these men but judging from this study it has not been successful. While about half of the re-admitted men had taken this training only 2% had worked at the new occupation. The majority of the men re-establish themselves, it is the unsuccessful minority who return to the sanatorium whose needs must be more carefully studied and more adequately met.

Perhaps the Combined Industrial and Farm Colony idea will prove to be the best way of providing for ex-patients. The essential expert medical care together with good living conditions and graduated work can be provided by this plan in connection with the sanatorium and the patient can here support himself, so far as he is able to do, with safety. This plan has been well worked out on the Papworth Estate in England. While

the problem differs somewhat in Canada, a beginning should be made with a small farm and workshop close to the sanatorium with competent instructors for both. Since it is both expensive and unwise to permanently hospitalize these patients and since so many are untrained as well as unfit, it is evident that some attempt must be made to provide practical instruction and part-time work in connection with the sanatorium and at the proper stage in the individual's treatment.

## BOOK REVIEWS

**THE CRIPPLED HAND AND ARM.**—A monograph on the various types of deformities of the hand and arm as a result from abnormal development, injuries and disease, for the use of the practitioner and surgeon. By Carl Beck, M. D., 302 illustrations; cloth; 243 pages; price, \$7.00; 1925; J. B. Lippincott Company, Philadelphia.

This valuable work is divided into two parts, with eleven chapters. It deals with one of the most important of the many phases of surgery. The importance of the hand, its functions, anatomy, physiology, congenital deformities, injuries, mutilations, burns, and diseases are considered in the first part. The second deals with disturbances of the wrist, forearm, elbow and upper arm crippling the function of the hand; artificial arms and hands and technique.

The possibilities of function saving, plastic and transplantation work. The many little-known devices of ingenuity are well known to the expert surgeon, but they are not appreciated by the practitioner having little of such work to perform. However, a mis-step after hand injury from any cause at the early stage may wreak irreparable injury to the member. For this reason it is well that we have this work as a guide. It is entertaining and worth while from the beginning and should be read by practically every practitioner.

**FRACTURES AND DISLOCATIONS.**—Immediate management, after-care, and convalescent treatment with special reference to the conservation and restoration of function, by Philip D. Wilson, A. B., M. D. F. A. C. S. Instructor in Orthopedic Surgery, Harvard Medical School, and William A. Cochrane, M. B., Ch. B., F. R. C. S., Edinburgh. University Tutor in Clinical Surgery, University of Edinburgh. 978 illustrations, cloth 789 pages; price \$10.00; 1925; J. B. Lippincott Company, Philadelphia.

This work brings to us all the new accumulations resulting from recent collections due to industrial accident laws, which in many instances have disclosed unnecessary waste of human material both in lives and function. The experiences springing out of the World War, with its great mass of irrefutable evi-

dence is also brought into compact form, and the many newer things arising from that holocaust are condensed into usable form for the surgeon and practitioner. It is noted that from the War's experience debridement, direct skeletal traction, the Thomas splint, overhead suspension, fixation in positions promising the greatest function, and roentgenographic control are matters of common routine in our larger hospitals. It is noted that application of much of these matters is not so difficult as has been urged outside of the larger centers, that much of it is really applicable everywhere and should be used, as they will be when they become more familiar by study and experience. The great amount of material available at the Massachusetts General Hospital has been culled to make of this a work of the highest value. It is stated that in general the staff of the Fracture Service of this institution is in accord with the principles and practices laid down in this volume. The illustrations are nearly all new and are so profuse and to the point that little is left to be desired in that respect.

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**DISEASES OF THE HEART.**—Diseases of the Heart, by Dr. Henri Vaquez, Professor of the Faculty of Medicine of Paris; Translated and edited by George F. Laidlaw, M. D., Associate Physician to the Fifth Avenue Hospital, New York City. Introduction by William S. Thayer, M. D., Johns Hopkins Hospital, Baltimore, Md. Octavo volume of 743 pages, illustrated. Philadelphia and London; W. B. Saunders Company, 1924. Cloth \$8.50 net.

It has been a rare privilege to have had the opportunity of reviewing such a masterful treatise as Professor Vaquez's "Diseases of the Heart."

Its pages contain much about the heart and its diseases that the general practitioner, and as well the specialist, should know, but do not. It is written in a free, easy, graphic and common sense style, understandable to the general practitioner and at the same time contains much scientific truth. It reflects in its every page, the thoroughness, the earnestness and the great knowledge of research and clinical medicine of the author. Controversial points in pathology and treatment are presented from all the different viewpoints and the author's conclusions are clear and conclusive without attempting to be dictatorial or argumentative.

The book is decidedly up-to-date, containing much that is new and valuable, in the line of diagnosis and treatment, especial attention being placed on radioscopy and electrocardiography and its bearing on diagnosis and prognosis.

The arrangement of the book is excellent. The introduction is an interesting review of the history of cardiology from the time of Harvey up until the present time.

The outlines of Anatomy and Physiology are presented with an exposition of both the neurogenic and myogenic hypotheses and the author's conclusions.

The book proper is divided into five parts. Part one takes up the Methods of Examination and is a clear, clinical exposition of all the older as well as the newer methods of examination including radioscopy and electrocardiography. The pages on murmurs are especially interesting and profitable to me and should be to all general practitioners.

Part Two deals with the Cardiopathies and Arterial Hypertension. In this section the chapters on Pericarditis, Mitral Stenosis, Angina Pectoris, and Arterial Hypertension were outstanding and contain much that is new and valuable.

Part Three presents the Arrhythmias. In this section are many interesting Electrocardiographic studies and this section particularly contains the latest conclusions in this line.

Part Four has to do with Heart Failure and it is here especially that the Author demonstrates his almost incomparable style of description in getting etiology, symptoms, pathology, evolution, and prognosis especially readable to the General Practitioner.

Part Five takes up treatment and deals with Diet, physical and medicinal agents, etc. Very properly Digitalis receives its proper amount of space.

The historical sketches throughout the book bearing on various phases of cardiology are interesting. The bibliography is especially comprehensive and representative of the best of the literature from all sections and is well placed.

There is so little to criticize in the book aside from a hint to the proofreader for a more careful reading, for there are typographical errors scattered occasionally throughout the book, and so much to praise that the reviewer believes the book is the latest and most outstanding contribution to the clinical study of Diseases of the Heart and Dr. Laidlaw deserves much credit for his work in presenting to the American Practitioner the life work of such an ardent student and foremost Clinician as Professor Vaquez. It is well worth the busy practitioner's time to read every page for it will make him a better diagnostician and therapist and thereby a better doctor.—Roy A. Wolford.



**PRACTICAL MEDICINE SERIES—1924**, Comprising eight volumes on the Year's progress in Medicine and surgery. Under the general editorial charge of Charles L. Mix, A. M., M. D. **VOLUME ONE. GENERAL MEDICINE**, Department of Infectious Diseases and Endocrinology; Edited by Geo. H. Weaver, M. D., Professor of Pathology, Rush Medical College; Physician in Charge, Durand Hospital of the John McCormick Institute for Infectious Diseases.

**Diseases of the Chest (Excepting the Heart)** Edited by Lawrason Brown, M. D., Chairman of the Medical Board, Trudeau Sanatorium, Saranac Lake, N. Y.

**Diseases of the Blood and Blood-Making Organs; Diseases of the Blood-Vessels; Heart and Kidney.** Edited by Robert B. Preble, A. M., M. D. Professor of Medicine, Northwestern University Medical School; Attending Physician, St. Luke's Hospital.

**Diseases of the Digestive System and Metabolism**, Edited by Bertram W. Sippy, M. D., Professor of Medicine, Rush Medical College; Attending Physician, Presbyterian Hospital and Ralph C. Brown, B. S., M. D., Associate Professor of Medicine, Rush Medical College, Attending Physician, Presbyterian Hospital. Illustrated, Cloth 736 pages, 1924. Price \$3.00.

An up-to-the minute review of the past year's literature in the fields above enumerated. A volume that every general practitioner should subscribe for and keep upon his desk for immediate reference. It contains many valuable suggestions evolved from late experience in the control and care of the various subjects considered.

**INTERNATIONAL CLINICS, VOLUME FOUR, THIRTY-FOURTH SERIES, 1924.** Edited by Henry W. Cattell, A. M., M. D. Philadelphia, with the collaboration of many eminent English and American authorities. Illustrated, cloth, 308 pages, J. B. Lippincott Company, Philadelphia.

The forgotten past recurs vividly to us who faced the ever present menace of malarial infection throughout the southwest upon reading an article in this issue "Quinine in Acute Malaria; Value of Intramuscular Injections", by N. P. McPhail, M. D., Divisional Medical Superintendent, United Fruit Company, Quirigua, Guatemala. Nearly sixty thousand cases over a period of ten years places him in a position of the widest experience. The volume is otherwise replete with articles on many of the special infections incident to the south and tropical countries, Pellagra, Yellow-Fever, Bacillary Dysentery. The nature of intestinal obstruction. The use of the X-ray and radium from the standpoint of the clinical surgeon are two subjects of pressing importance. Insulin is also given space. Calcification of the pericardium and the clinical classification of congenital cardiac disease are two subjects of interest to the internist.

**VOLUME TWO, YEAR BOOK, GENERAL SURGERY**, Edited by Albert J. Ochsner, M. D., Major M.R.C.U.S.A., President American College of Surgeons, Surgeon-in-Chief Augustana and St. Mary's of Nazareth Hospitals; Professor of Surgery in the Medical Department of the State University of Illinois, Illustrated, cloth, 704 pages, 1924, Price \$3.00. The Year Book Publishers, 304 South Dearborn St., Chicago.

This volume widely covers the fields of surgical activity for the past year. It seems to comment on practically every phase which may confront the surgeon from the anesthetic through radiology, instruments, antisepsis and asepsis, diabetes, malignant tumors, blood vessel surgery, transfusion, bone surgery, nerves, brain, thyroid, mammae, chest, heart, abdominal surgery, the gall-bladder, the spleen and fractures. It is too useful not to be found convenient of access to every busy man and student of surgical problems.

**A MANUAL OF OBSTETRICS**, (Second Edition, Reset)—Manual of Obstetrics, by John Cooke Hirst, M. D., Associate in Gynecology and Obstetrics, Graduate School of Medicine, University of Pennsylvania; Associate in Obstetrics, School of Medicine, University of Pennsylvania. Second Edition, Entirely Reset. 12mo of 551 pages with 229 illustrations. Philadelphia and London; W. B. Saunders Company, 1924. Cloth, \$4.50 net.

This excellent guide for the obstetrician and practitioner contains several important additions not carried in the first edition. Among these are the sugar tests for early pregnancy; the Rubin test for artificial pneumoperitoneum to establish patency of the fallopian tubes in sterility; glucose injections in toxemia of pregnancy; Potter method of podalic version, technic of Cesarean section; the Kielland forceps; the newer methods of attempted disinfection of blood in puerperal sepsis; puerperal psychosis; a revision of repairs of lacerations, with advantage of delayed and immediate repair; liver function tests and other important phases. The margin of safety in administration of mercurochrome intravenously in sepsis is stressed, as well as the dangers attendant upon this rather dangerous, though often brilliant procedure.

#### PITUITARY EXTRACT

There are a good many pituitary extracts on the market, scarcely two of them alike in activity, and consequently, dosage. In fact the same preparation may differ at different dates by as much as 50 per cent if improperly made, carelessly exposed to the light, or kept too long under even favorable conditions. Pituitary extracts should be dated, and the ampoules should be kept in their cartons till needed. It goes without saying

that the date stamped on the package should be consulted.

A pituitary product that has won an enviable reputation because, for one thing, it was the first in the field, and for another, because the standard of activity applied to it is such as to make the average obstetric dose  $\frac{1}{4}$  to  $\frac{1}{2}$  cc. (4 to 8 minims), is Pituitrin, P. D. & Co. Pituitrin is tested, we are told, by two methods, to demonstrate, respectively, its effect on blood pressure and its effect on uterine tissue.

A new booklet on "Pituitary Therapy," covering not only Pituitrin but preparations of the anterior lobe of the pituitary body, and of the whole gland substance, is offered to physicians by Parke, Davis & Co., Detroit, Michigan.

### *Abstracts, Observations from Current Medical Literature*

#### BRONCHIAL ASTHMA AND ALLIED ALLERGIC DISORDERS

A room has been installed in the University Hospital in Philadelphia for the study of bronchial asthma, allergic coryza and hay-fever, where it is possible to observe patients under controlled conditions of environment in relation to the presence and quantity of specifically allergic in halation substances. Provision has been made to study the effects of alteration of barometric pressure and wet and dry bulb temperature in these disorders, including those cases of asthma in which allergic sensitivity cannot be demonstrated. The experiments, here recorded by Simon L. Leopold and Charles S. Leopold, Philadelphia (Journal A. M. A., March 7, 1925), seem to indicate that it is possible by means of this equipment to render a room relatively dust free, efficient to the point of keeping a patient with dust asthma free of asthmatic siezures. It seems evident that house dust contains one or more specifically allergic substances capable of producing an immediate constitutional reaction, and that this reaction cannot be explained on the basis of mechanical irritation. Changes of barometric pressure and wet and dry bulb temperature have had no demonstrable effect on the clinical symptoms of those patients so far observed. This report is to be regarded as preliminary, in order to record the type of room which has been used and its equipment. Further studies are in progress and will be the subject of further communication.

#### SERUM HELPFUL IN SCARLET FEVER

Promising results have been obtained in the treatment of scarlet fever with the new Dochez serum, says Hygeia, popular health magazine published by the American Medical Association.

Dr. Francis G. Blake, in treating cases with the new serum, has reported many less deaths in severe cases of scarlet fever and less numerous and severe complications than under the old methods of treatment.

"If these results are confirmed on a considerable number of cases by other investigators,"

concludes Hygeia, "we may conclude that scientific medicine has assumed control of another of the severe infectious diseases."

#### SPECIAL CIGARETS OF NO VALUE IN CATARRH

Smoking "cubebs" or other cigarettes on the market is of no value in treating catarrh, Hygeia, popular health magazine published by the American Medical Association, tells one of its readers in answer to his question.

Catarrh jellies are occasionally of use because they keep the nasal mucosa greased and the discharge softened. Thorough cleansing of the nose once or twice a day, followed by an oil application, does more good in the long run. The most sensible thing to do is to consult a reliable physician and follow his directions, the magazine says.

#### CRYING WASTES BABY'S ENERGY

Crying is hard work. When a baby squalls he uses up twice as much energy as when he is asleep. The work of the body, represented by what is called "Metabolism," is doubled during crying.

If a baby cries every minute for twenty-four hours, it does an amount of work equivalent to lifting its own weight to the top of the Washington monument, Dr. John R. Murlin of Rochester, N. Y., has figured out. This seems extraordinary, but it indicates the rate of body growth in the young.

The moral of this story is that if the child is to grow properly, it is best that it should not waste its energy in crying. A healthy, properly nourished baby cries very little.

#### MENACE OF POORLY FITTED SPECTACLES IN OLD PERSONS

John J. Morton, New Haven, Connecticut. (Journal A. M. A., February 28, 1925), stresses the fact that poorly fitting spectacles can be a real menace to their wearers. This is especially applicable in those beyond middle age, and the danger is considerably increased when senile changes have taken place in the skin of the irritated area. One should be mindful of this possibility and should take every precaution with the proper adjustment of eyeglasses. The places where constant abrasions are to be avoided are the bridge of the nose, the sides of the bridge near the inner canthi, the temples and at the back of the ears. In the four cases reported by Morton, the temples were affected in three instances, and the fourth lesion occurred behind the ear. Owing to the tendency for basal cell cancer to occur most commonly on the nose, it is probable that most growths arising in irritation from spectacles will occupy this position. It would seem a priori that spectacles of the pince nez type would be especially liable to cause trouble, but no data are available to support this assumption. In view of the possibility of malignancy occurring in an irritated area, one should take the responsibility of impressing on patients the necessity of promptly attending to any maladjustment of their spectacles.



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### SURGICAL MORBIDITY AND MORTALITY, CAUSES AND PREVENTION\*

A. L. BLESCH, M.D., F.A.C.S.  
OKLAHOMA CITY

No matter what the pathology in a given case, the surgery of it should not kill. This statement is theoretically correct, but in its practice in order to make it work out approximately correct the surgeon will be obliged to exercise every known aid to his art. It will be necessary—imperative—that he consider and give due weight to all factors behind and in which may be lurking the imp of death.

In this short paper, utilizing the clinical material of our clinic as a basis—our endeavor will be to briefly analyze these factors in order to excite a keen discussion in the hope that out of this discussion will come a greater surgical margin of safety for the patient. When Medicine in all its specialties shall have reached that stage in its evolution where the patient and he alone shall be the prime and the only consideration of the physician the isms, which haunt us and defraud us now, will wither and die a natural death. The short-comings of our own profession are the reason for the charlatan.

#### SURGICAL MORBIDITY:

Post-operative morbidity largely groups itself about two important factors with each of which the surgical operation itself has much to do.

#### ILL-ADVISED OPERATION:

The question of accuracy in diagnosis bears an important relation to post-operative morbidity in two ways: first in failing to relieve a source of pre-operative complaint in that the patient is operated for what the surgeon *thinks* he has, while the thing he really has escapes. The patient is fitted to the operative shoe instead of the operative shoe to the patient.

It is easy surgery to remove a non-diseased appendix or ovary for a pain in the right lower abdominal quadrant, but if the patient is suffering from a stone in, or a stricture

of, the ureter or a right pyelitis, a good operative recovery in which there is some glory may be predicted but to the relief of the symptoms which the patient does not receive is added the morbidity risk, slight though it may be, of all operations however skillfully done.

#### ILLUSTRATIVE CASE:

Mrs. A., a married woman of about 35, following a severe fall on her left hip entered the hospital complaining of a quite constant pain in this hip which was exaggerated upon exercise. She also gave the history that for several years before the fall she had been troubled with a dull pain associated with a moderate degree of soreness in the left lower abdominal quadrant. No fever to her knowledge and no nausea.

Clinical examination was negative except for tenderness to deep pressure in the lower quadrant—no rigidity; tonsils enlarged and cryptic.

On this showing alone she was submitted to left oophorectomy, hysterectomy and appendectomy. So far as the operation was concerned she made a beautiful convalescence except that she complained of exactly the same pain during it, that she had before. She was assured that it was quite the usual thing to have post-operative abdominal pain and that this would disappear in time.

After a year she again entered the hospital with precisely the same syndrome. A careful work-out which should have been done in the first instance revealed a stricture of the left ureter about two inches above the bladder with dilation above this point, left pyelitis and a chronic arthritis of the left hip joint.

Now in the light of the history it was clear to see that the old pain was due to the ureteral and renal pelvis involvement. While the trouble with the left hip followed a metastatic involvement of the joint determined by the traumatism as such things so frequently are. Where the primary focus was located, was not so clear, but it might be so-called rheumatic in nature with the tonsils as its source or from the infected kidney and ureter.

\* Read before Section on Surgery and Gynecology, Annual Meeting Oklahoma State Medical Association, Oklahoma City, May 13, 14, 15, 1924.

Treatment directed to the ureter and kidney promptly cleared the old complaint. The tonsils have been removed but it will take time to tell whether the later complaint will yield to what has been done.

This much is clear, the operation was certainly ill-advised, and a certain morbidity is sure and indeed has already followed the removal of the sexual organs.

For the good of our profession only too many people have had a gastro-jejunostomy done who had no ulcer, nor stenosis. This naturally enough followed the teaching of a great clinic that relief following the operation was purely mechanical, i. e. gravity drainage of the stomach. There is more, far more to the human body than mechanics, perfect as these are. If the relief is mechanical, how natural that the operation should be done, as it was often, and sometimes is yet done for faulty stomach drainage due to ptosis or atonicity. How miserable were our failures! As we look back upon them, how humiliating!

In acute disease errors in surgical diagnosis are not so common as in chronic conditions. According to recent statistics operating under the diagnosis of chronic appendicitis has resulted in relief in about sixty percent of the cases. The unrelieved forty percent go from one operating table to another until at last in despairing of relief at our hands, they fall into the open arms of the Charlatan.

To fill this want new isms are born with every moon. These are the measure of our failure.

Surgery is a refined art but in its application should have, must have a demonstrable lesion, call it gross, if you will, if justifying results are to be obtained.

Operations in which the normal physiology is compromised may at times be a necessity but the burden of proof is on the surgeon. Witness the disrepute into which the operation of ileosigmoidostomy has fallen. Likewise gastroenterostomy is being hard put to maintain its standing. Yet the latter with all its draw-backs due to disturbed physiology—is an operation of necessity at times. But more and more it is giving way to direct operative treatment of the ulcer leaving the physiology of the stomach undisturbed. The limitations for the operation are rapidly settling down to: A. Pyloric Stenosis from any cause in which a brilliant result is the rule; B. Duodenal Ulcer which by virtue of location will not admit of excision or sleeve resection. In the latter case the writer's experi-

ence gained in several hundred cases seems to point definitely to the fact that relief is not so much because of mechanical drainage with side-tracking of the ulcerating duodenal loop as from continuous bile alkalization of the stomach contents. In this it is akin to Sippy's medical treatment.

A fluoroscopic study of the gastro-jejunostomized duodenal ulcer cases without stenosis demonstrated that a very large portion at least of the stomach contents goes per vias naturalis by election, obeying the physiological law.

## 2. ADHESIONS:

Upon this subject the writer has rather positive convictions based upon the study of over 10,000 surgical cases. These convictions have so far as morbidity is concerned been formulated into the following aphorism: intra-abdominal adhesions no matter how massive, do not cause trouble unless they compress a sensitive organ or stenose a hollow viscus. Per contra when they do either one of these no matter how small, they give rise to anything from a vague abdominal uneasiness to a death-dealing catastrophe.

Etiologically adhesions may be best considered under two heads:

- a. Operative.
- b. Non-operative.

Operative adhesions most concern us as to post-operative morbidity. Wherever possible the prevention is paramount. Prevention may be summed up in two words: *peritonealization, gentleness*. Where peritoneum is not available to cover in raw areas, grafts of free or pedunculated fat will answer. Many times the writer has utilized these grafts and was thus able to avoid an extensive intestinal resection with the resultant physiological disturbance.

Rough manipulation with fingers, instruments or gauze will not only be answered by shock in varying degrees but will also be paid in full by the formation of adhesions due to destruction of endothelium. Another important factor in the prevention of post-operative adhesions has to do with hemostasis. There is no longer any doubt in the mind of the writer that not only do pools of blood in the peritoneal cavity favor infection through which adhesions arise but also acts as an irritant destroying the endothelial layer by ferments. The irritation of free, fresh blood in the peritoneal cavity is obvious to all when the muscular rigidity of a ruptured ectopic pregnancy is brought to mind. The surgeon who carelessly leaves behind him bleeding surfaces or puddles of blood will certainly pro-



note adhesions in the abdomen which may or may not, according to the accident of location, cause trouble.

The surgery of dealing with adventitious adhesions or acquired membranes such as the so-called Jackson veil or colonic bands differs in no essential surgically from the above except that the problems of the prevention of the reformation must deal with the original causative factor. This is probably a developmental response to increased ligamentous strain and leads us far a-field into the realms of embryology and evolution. Physically we are not all Greek gods and goddesses.

Again the problem of early and accurate diagnosis and prompt and scientific surgery in all intra-peritoneal inflammations is of colossal importance in the prevention of adhesions.

#### ANESTHESIA:

Here we cross over from strictly surgical problems in post-operative morbidity to the medical domain. Anesthesia is not alone the surgeons concern but also that of the internist. No one any longer doubts its importance to the future health of the patient. Sulphuric ether dies a hard death. It is not strange that this is so. For the operative seance the profound relaxation of the soundly etherized patient is ideal for surgical manipulation. But acidosis vomiting in chronically septic and profoundly exhausted patients is not rare, often causes death, always complicates convalescence and sometimes leaves a permanent stigma of deterioration, to say nothing of latent lung and renal lesions which are irritated into activity. Every anesthetic dose of ether is physiologically a big dose—all the patient can bear and survive.

The problem with any general anesthetic but especially with ether is how little can be given! Anything which reduces this amount to the minimum, provided that the thing used to do this in itself is not deleterious, is desirable.

For many years ether has been practically eliminated from our operating service. Nitrous oxide gas with oxygen and the liberal use of local has been substituted much to the advantage and comfort of our patients.

It is admitted that "team work" must be cultivated between surgeon, anesthetist and internist in order for its successful use. It is also true that rough surgery cannot be practiced, but this is to the decided advantage of the patient. No little part of the disadvantage of ether to the patient is that he is too dead to protest unjustifiable operative insult.

#### MORTALITY:

In considering surgical mortality many seemingly imponderable factors appear. Aside from demonstrable lesions of the kidney, heart, lungs, liver, pancreas, etc., there is the psychic element which can only with hazard be ignored. With these grosser demonstrable lesions we can be on our guard. The laboratory can aid us greatly in determining the margin of safety in these, but there is no laboratory test that will as yet weigh the imponderable factor of the mind.

The same factors which stand in a causative relation to morbidity also have a direct bearing on surgical mortality. The patient whose threshold of safety is narrow may be overbalanced by these drains on his vitality.

Concerning the question of anesthesia alone, our cross-index to some 10,000 cases was lost during the storage of the records incident to my service in the Army and I have been engaged in making a new one. This has given me the opportunity of a recent careful review. Dividing the cases on the basis of the anesthetic used there is an appreciably higher mortality by about  $\frac{1}{2}$  percent during the ether era than during the gas-oxygen and local, and the local era. While this seems small, we are now in the surgical era when small margins are assiduously sought by the advanced guard.

Under the heading of shock many things must be considered. First of all the brain, for it must be true that whatever the cause here is where it is registered. Every possible impact, physical and mental must be kept from ringing up the brain and registering itself there. There is no general anesthetic that will prevent physical stimuli from exerting the full effect upon this delicate structure, therefore, with the gentle touch of this-tle down must the surgeon do his work, so that these stimuli will be as few and as mild as possible. We must consider the brain cells as being under bombardment while an operation is going on hence the fewer and gentler the projectiles hurled at them the less the disintegration which we call shock.

The shock entity may occur by two pathways to the brain, the psychic and the physical. With the former the emotions, fright, anger, horror, dread, have to do. With the latter physical suffering, over-work, loss of sleep, starvation, sepsis, anything which annihilates the vitality by the rapid fire of the machine guns of acute disease or the traumatism of operation, or the slower, the more persistent wearing down of the centers by the trench warfare of chronic ailments. In both

the result finally to the brain cell is the same—it is dechromatized.

So the prevention of shock has to do with guarding the patient against worry before the operation in the first place and the delivery of a shockless operation so far as possible in the second place. Can these things be done? Yes! to a great extent. The patient's mental attitude toward the ordeal can be influenced favorably. We have demonstrated this time and again in the hyperthyroids than whom no more apprehensive patient can be found. These patients can die from fear alone.

The harmful physical stimuli from the tissue insult of the knife can be prevented from hitting the brain cell by blocking the nerves which transmit them. The viscera *can* be handled gently. Sharp instead of tearing dissections can be made. The viscera *can* be kept within the warm, moist abdominal cavity provided the surgeon does not begin the fight on them. They never begin it. How easy it is to demonstrate this fact when doing a section under local alone! If gentle enough after opening the abdomen one can look in and see the entire abdominal viscera lying quietly under negative pressure. How promptly they rise up and protest in reply to a very little roughness on the part of the surgeon. If possible avoid *beginning* a fight on them. Post-operative intestinal paresis is also prevented by these same tactics which might well be called surgical strategy.

Post operative cathartic slam-banging is deplorable. It also shocks. When by the passage of flatus the patient indicates that normal peristalsis is present the gentle urge of an enema will be found to be all sufficient whether this is within 24 hours or two or three days.

Also pre-operative dehydration by active catharsis is even as much to be avoided. We have no ether vomiting for the simple reason that we use no ether. We do get some vomiting from morphine where much is required as well as from paresis when that occasionally occurs.

Fluids, water, coffee, tea liberally from the time the patient is placed in bed. The circulatory system is to be kept full. This can be done for the patient is wide-awake when placed in bed.

Again, as a matter of conscience, I must mention anesthesia. I sincerely believe that in the up-to-date operating room ether has but a most limited place. The anesthetic should be administered by a specially trained anesthetist, taught to work in co-operation

with the surgeon. There have been too many anesthetic morbidities and mortalities.

#### HEMORRHAGE:

While this may not be the immediate cause of death often, yet it is very frequently the remote cause. Hemostasis should be prompt and complete. Murphy very emphatically stated that hemorrhage is one of the most frequent and disastrous of surgical complications. Under the name of shock hemorrhage has been sailing these many years. Of course, the patient with hemorrhage has shock, why shouldn't they have?

It will be observed that little of this paper has had to do with surgical technique. We have not said *how* but *what*. The time is here when the surgery of the last 25 years must be carefully and critically analyzed by the surgeon himself. Has it been doing more harm than good? If not more harm than good, has it been doing more harm than it should? It is being balanced very carefully in the lay mind, I'm sure. The verdict they are rendering is not altogether in our favor I assure you.

I am going to close this paper with a case report, copied exactly from my records at this writing without comment from which, when I tell you that the name of this patient is legion, you may deduct what you will.

Mrs. X: married woman, 34 years of age, presented herself to the Clinic with the following history:

#### *Family history negative.*

*Personal history*, ordinary diseases of childhood, no complications. Influenza in 1918 when three months pregnant, recovery good. Another attack four weeks ago from which she has not fully recovered. Has had several attacks of tonsilitis, last of which following recent attack of influenza she has not yet fully recovered from. No other diseases, injuries, or operations except that four years ago both ovaries and the appendix removed. Her previous menstrual life had been normal. Abrupt, operative menopause. Three para, oldest child 16, youngest 5. Deliveries and recoveries were normal. Laceration of perineum with last. Repair primary, successful. Best weight 117 pounds. Present weight 90 pounds. Principal weight loss has been since operation four years ago. Fatigues easily. Sleeps poorly.

*Present illness*: Began shortly before operation four years ago with gaseous disturbances which followed within fifteen minutes of food ingestion. Eructations gave little, if any relief and were tasteless. No post-ingestional stomach burning or pain. Appetite is, and has



been good, but she is afraid to eat because of gaseous disturbances. These are the symptoms upon which, and for the relief of which the above operation was done. Patient is positive in statement that there was not nor is there now any abdominal or pelvic pain or soreness. No backaches. No vaginal discharge. She is equally as positive that not only did operation not relieve the gaseous disturbance, but that since that time it has grown progressively worse. She has been constipated all her life but this too has grown worse. Is still suffering from "hot flashes" and "nervous spells". While never strong she has not regained that strength lost from operation.

*Physical Examination:* Emaciated brunette woman, pulse 100, regular but compressible. Temperature 98.3. Pupillary and other reflexes normal. Mouth: gums in good condition except neglected, several bridged teeth. Tonsils submerged and infected. Glandular system, post-cervicals only enlarged. Chest, including heart and breasts negative. Abdomen is of the markedly ptotic type, the stomach lying in the pelvis wholly below umbilicus. Well healed scar in lower midline.

Pelvic, official redness about introitus vaginae and urethrae. Examination quite painful, pain due to local soreness. Uterus small, located high, freely moveable, not sensitive, senile. Perineum and cervix in good condition. Entire genitalia in involuntary stage.

Laboratory: urine normal. Blood normal to count, hemo-globin and Wassermann.

X-ray and Fluoroscopia, gastro-intestinal tract normal peristalsis, no defects stomach or duodenum. Stomach in pelvis. Chemistry and bacteriology of stools normal. Did this patient need operation? Was she benefitted?

*Discussion:* S. D. MAYBERRY, M. D., ENID.

I feel highly honored in being asked to discuss Dr. Blesh's paper. I also feel very much disqualified. Dr. Blesh's paper covers much territory, but the points he emphasizes, to reduce mortality, are namely: conscientious work, carefulness, clearness in diagnosis, and a love for our fellow man.

There are a few here, today, who are my seniors. I would much rather listen to their superior experience and wisdom. There are many who are my juniors, and in the presence of their rising fame, I feel like one carrying a lantern in the night. I realize that my beams of light are scarcely visible in the glory and brightness of rising youth. I felt the force of the Doctor's paper and appreciate the noble and refined sentiment expressed. I feel that the doctor should live a thousand years; I hope he will live a thousand years before Father Time

sets his seal, marking him with deep lines of thought and care. I hope that no doctor will ever lose track of the fact that his patient's interest must forever remain the central thought, and the prime and only consideration.

To commercialize the practice of medicine is to take it from a high calling and drag it down into Hell, and the medical profession with it.

A friend indeed is what I mean to be,  
And in time of trouble, I'll come to you  
And in the hour of need, you'll find me true.

This is the sentiment that Dr. Blesh especially emphasizes, and this will reduce the mortality. A mother said to me, "If my child should die from this operation, my life will be gone too. Therefore, I beseech you in the name of heaven to know all that is given you to know about the patient, and then for God's sake proceed with care". This advice covers the point exactly and will have a marked effect on the mortality. Her child was no more precious than any other child; we are all of the common people—no one born on American soil has a right to look down upon his neighbor, or hold him in contempt. We are of common origin; we have a common religion, and we believe in the fellowship of man and should practice our profession in the fear of the Lord and in a love for human-kind.

When Doctors reach that stage of evolution where our patients become the central thought, and the prime and only consideration, we can then honestly claim to be of a high calling.

Surgeons need more time to study their patients before operating. Too often the Doctor is in a hurry to rush the patient to the knife, and this certainly increases the mortality. The public condemn us for our errors; we decide too often in haste, and repent at leisure. We do not always do our best. We rely too much on our doctrine. We know that our doctrine is based upon the truth while all other cults are based upon a false premise. We glorify in our doctrine, and still often fail to put it into practice.

The scientific practice of medicine is the only art that should be permitted in the treatment of our sick. I never took any stock in Quackery; I felt the Lord made a mistake when he sent Mary Baker G. Eddy to save us from diseases. Of course, you understand that the Lord sent Mary Baker G. Eddy, because she said so. He sent Christ to save men from sin, 2,000 years ago, but about 85 years ago, he dropped Mary down in the Eastern part of the United States to

save us from our diseases. She being the only child, the Lord and his son evidently spoiled her. She was wilful, deceptive, carried on too many flirtations, and married too many men to suit my idea of a divine person.

Ether, of all anesthetics, is the best; it does not devitalize tissue; does not produce vomiting or does not kill.

## A STUDY OF MORTALITY AND MORBIDITY IN ACUTE APPENDICITIS\*

HORACE REED, M.D., F.A.C.S.  
OKLAHOMA CITY

This report is based on the study of 144 records in St. Anthony and University Hospitals. The records of cases in St. Anthony Hospital, 95 in number, were those of 1922-23. The University Hospital records, 49 in number, were those completed since July, 1923, hence for about 10 months. The records studied were found filed under final diagnoses as follows:

- (a) Acute Appendicitis
- (b) Abscess—Abdominal and Appendiceal
- (c) Peritonitis (of Appendix origin).

Only those records of abdominal abscess were included which stated definitely that the abscess was of appendix origin.

Tabulation of data was made under the following scheme:

1. Hospital number.
2. Length of interval before operation.
3. Pre-operative Catharsis.
4. Drainage at operation.
5. Post operative complications.
6. Length of stay in Hospital.
7. Outcome—or results.
8. White blood count with neutrophils—percentage.

It is obvious that a thorough digest of all this data could not be included in a single paper—and it is expected that at some future date other studies will be made from it.

In this series of 144 cases there were 14 deaths or a mortality of 10%. Eight deaths occurred at University Hospital—a mortality of 16.3%. There were six fatal cases at St. Anthony—a rate of 6.3%. From this wide difference in mortality it appears obvious that the combined mortality from appendicitis in the two institutions taken over equal periods of time is at least 12%. This discrepancy in the figure for combined mortality was not thought of until after the marked

difference in mortality rate was noted. It was then too late to look up other records and procure the information for this paper.

The surgical staffs of the two hospitals are composed of practically the same personnel. The management of cases of appendicitis, therefore, is conducted in the same manner in the two hospitals. A death rate from appendicitis which is 2½ times greater in one hospital than in another of equal standard and these hospitals being under control of practically one staff can be explained only by factors not under the control of staff managements. In this instance there are apparently two main causes for this difference.

1. Relatively few patients who are financially able to employ a surgeon and meet hospital expenses are cared for in University. The reverse of this is true as regards St. Anthony. The records do not show, however, that there was any marked difference in time in which patients entered hospital, after onset of appendicitis. For instance: of 49 patients in University Hospital, 19 were admitted within one day or less, and out of 95 in St. Anthony, 45 were admitted within 24 hours. Most physicians will direct the care of a private patient in the home when that patient refuses the advice to go to the hospital. The indigent patient is just as human and perhaps just as often refuses to go to the hospital when first advised. But while such a patient is endeavoring to make up his mind to go to the hospital he rarely has the close supervision accorded the pay patient. I regret to have to say that my work with some of these patients in the University has given me the opportunity to learn that the above statement is true. The records, fortunately, are silent on this phase of the question.

2. The second large factor having to do with high mortality in University Hospital is that of transportation of the patient. Many of these patients are brought in from long distances—often over rough roads. Four patients with general peritonitis came into my service at University Hospital during the last 18 months. Three of these were brought in by auto over distances varying from 16 to 24 miles. These three died. The fourth—an under-nourished girl of about 7 years, was from the city. She survived the attack, was eventually operated under local anesthetic and recovered. But the records were not studied on this phase of the question. I believe that most of the surgeons have made observations along this line and can confirm my personal conclusions.

But considering the deaths of both institutions, we find that the average length of time

\* Read before the Oklahoma City Academy of Medicine, June 2, 1924.



intervening before admission to the hospital in in those that died, to be 5 days—the shortest time was 3 days, the longest 10 days. The average length of time after admission to the hospital before death was 46 hours. The longest was 5 days, the shortest 4 hours. Five of the fourteen cases were submitted to surgical operations. Death took place 1 day, 1½ days, 2 days (complications, Pneumonia) 1 day. (Enterostomy done on this patient), and 2 days.

Of these 14 cases cathartics had been given previous to admission to the hospital in 10; none in one and in three no statement was made.

In the 144 cases, the records show that cathartics had been administered in 52. Of these. 35 had complications, including 10 deaths. In 92 cases not receiving catharsis there were 11 complications, if three deaths be included. Three deaths occurred in which there may have been catharsis—in these the records are silent as to catharsis. If these be excluded there were 89 who were not given cathartics and only 8 developed complications. These facts are so convincing as to the danger of cathartics as to preclude the necessity of any further argument.

There were 46 cases with complications, including 14 deaths. The average length of time intervening between the initial symptom and admission to the hospital was 7 days. The longest interval was 8 weeks and the shortest was 8 hours.

There was no mortality in the cases operated on less than 3 days following, the initial symptom. Nine of 98 uncomplicated cases were operated after the third day. "Complication" as herein employed, refers to the whole course of the disease.

When to operate in acute appendicitis after there has been peritoneal contamination has been a muchly discussed question. These figures indicate that operation is safe and advisable within three days from the initial symptom. There is not sufficient evidence in the records to justify the statement, however, that this may be made a *hard* and *fast* rule.

In the study of morbidity there were no outstanding facts obtained. Of those who survived there were 46 in the hospital more than 15 days. The average length of the interval before admission to hospital in these 46 was 6 days. The average length of residence in the hospital, 23 days—22 of the 46 had catharsis before admission. Other data as to the influence on morbidity of vari-

ations in management, age of patient, etc., was not studied.

It is evident that morbidity is not altogether determined by the length of residence in the hospital. Only by a follow-up system of records can exact data on morbidity be obtained.

In conclusion I cannot refrain from saying that while the system of records as kept in these two hospitals are approved as meeting the minimum requirements of the American College of Surgeons—they are for a great part far from being perfect. This is not the place to discuss the reasons for making this statement. It can be stated that the fault lies with the doctors who compose the staff as much as with any one else. Each staff is supposed to read the record of his patient—make corrections or additions as needed, and, finally, to approve the completed record, as being satisfactory, before it is placed on file.

Finally I want to thank Dr. Starry, Miss Boyle and Mrs. Ross for much valuable assistance in the producing of this data from the records.

## THE INTRAVENOUS ADMINISTRATION OF MERCUROCHROME

JOHN A. RODDY, M.D.  
OKLAHOMA CITY

This report is presented with the hope of eliciting, rather than imparting, a better knowledge of the pharmacology of mercurochrome in the treatment of internal infections.

Fifteen cases so treated are reported:

### GROUP ONE, FOUR CASES

These patients were all white American males between sixteen and twenty-five years of age, robust. They were so similiar in all respects that an account of one gives a clear idea of the group.

R. L. 22 years of age, single, salesman: with the exception of a mild attack of mumps one year ago, was never previously ill, always enjoyed good health.

July 20, a furuncle appeared on his right elbow; three days later, without any antiseptic precautions he opened it, squeezed out pus and bound it up in a handkerchief. July 26th, he began to have anorexia, malaise, fever and pain in the right axilla, which caused him to take to bed. These symptoms gradually grew worse and were added to by headache, chills and profuse sweats.

July 28, 10 A. M. when I first saw him he appeared toxic, his temperature was 103,

pulse 130, respiration 22, tongue thickly coated and abdomen slightly tympanitic. A scab 1 cm. in diameter was removed from where the furuncle had been. There was no pus beneath it nor in surrounding tissues. There was no swelling, tenderness nor discoloration in the region of the elbow.

The right axillary glands were enlarged and exquisitely tender, any motion of the shoulder was painful, the region of the pectoralis muscle was very tender, slightly reddened and suggested a beginning subpectoral abscess. The patient was given a soap-enema, followed by a glucose-soda rectal drip; he also received 3 grains of aspirin every 3 hours.

At 4 P. M. same day his condition was unimproved and I gave him seven grains of mercurochrome in 20 c. c. of water, intravenously. Fifteen minutes later he began to chill, complained of feeling cold, and his temperature ascended to 105; he also had nausea, but no vomiting. These untoward symptoms continued for several hours, then gradually subsided, the patient going to sleep naturally about 10 P. M.

He awoke refreshed the next morning, with no symptoms except a slight headache and pain as before in axilla and pectoral region; temperature 98, pulse 100, respiration 18. The next day the headache was gone, pain, swelling and tenderness were much reduced, and thereafter rapidly and uninterruptedly declined. August 2, patient had completely recovered.

#### GROUP TWO, SIX CASES

These were cases of chronic carditis, presumably streptococcic, occurring in females between 30 and 60 years of age. The disease was of more than ten years standing in all. The youngest has both mitral and aortic lesions; and has been a cardiac invalid about ten years. Another, 33 years old has mitral regurgitation and has been a cardiac invalid less than a year. None of the others manifest valvular defects. The dosage varied from 4 to 6 grains. Following the first injection all had moderate reactions lasting from 2 to 6 hours. The younger patients showed the strongest reactions. None of them showed any definite improvement and the treatment was not repeated.

#### GROUP THREE, FOUR CASES

These were cases of chronic multiple arthritis with little, if any, cardiac impairment. All of more than five years duration, presumably streptococcic in origin, and occurring in females between 48 and 60 years of age.

Two of these patients gave a history of periods of remission lasting 5 to 6 months

at times during the course of the disease, so it is impossible to determine at this time the extent to which mercurochrome has benefited them. However, the disease was active when they received it, and within three days after the injection, fever, pain and malaise disappeared, and have not recurred: a period of nine months in one case and three months in the other. One patient in this group manifested no change in her condition following mercurochrome.

The history of the fourth patient is given in detail on account of its peculiarities.

P. B. American, white, 48 years old. At 18 years of age had severe acute maxillary sinusitis which became chronic and has been followed by a chronic naso-pharyngitis. There was no other previous illness and patient was a robust, hard-working medium sized woman until the onset of her present trouble, which began about 10 years ago, and is presumably streptococcic. There have been periods of exacerbation lasting one to two months each spring and fall since the beginning, with the exception of the last half of 1922, during which period the disease was completely quiescent, attributed to active nose and throat treatment and bacterial therapy.

All the joints of the extremities, including hip and shoulders are affected and there is advanced muscular atrophy and contracture.

In March 1924 the disease became more severe, in all respects, than ever before. Previously there had been long afebrile periods and rarely temperature above 101, now temperature was continuous reaching 102 every evening. All her joints were painful, the shoulders more so than ever before.

She weighed 121 lbs. and was given 5 grains of mercurochrome. A mild reaction without headache or vomiting followed. The next day her temperature was normal; there was less articular pain; improvement continued so that a week after the injection a period of quiescence was established, and she was up and walking about comfortably. This favorable condition lasted about a month, then fever, articular pain, swelling and tenderness recurred and she was given 6 grains of mercurochrome intravenously. It was followed within 20 minutes by one of the most severe and distressing reactions I have observed; severe chilling and hyperpyrexia for four hours, malaise, nausea and vomiting for two days.

There was no amelioration of her disease, nor has there been any since.

#### GROUP FOUR, ONE CASE

P. S. American, male, white, medical student, 22 years of age, robust, always enjoy-



ed good health, no previous illness.

Following exposure to cold and wet he developed naso-pharyngitis. Three days later he took to bed with malaise, chill and high fever. Pain, swelling and redness of his right ankle developed; soon after the right knee and right wrist were similarly affected. After a number of days symptoms referable to these joints subsided and coincidentally those of the opposite side were involved.

With exacerbations and partial remissions of symptoms, fluctuations of temperature between 100 and 103, and migration of the disease from joint to joint, this condition persisted for two months, in spite of massive doses of salicylates, mercury, potassium iodide, heat, light and hydro-therapy.

This was the history elicited when I first saw him May 20, 1924. At that time his temperature was 103, all the joints of the lower extremities were affected, there were no signs of disease of other organs, no evidence of a persistent focal source of infection, the disease was cryptogenic. I gave him 7 grains of mercurochrome which was followed by a severe reaction lasting two days. Thereafter his temperature was normal and symptoms rapidly subsided.

Two weeks later recovery was apparently complete and he has continued in apparently perfect health ever since.

### Conclusions

1. The intravenous administration<sup>1</sup> of mercurochrome regularly produces a general systemic anaphylactoid reaction which is severe in the majority of cases, and must therefore, restrict its use to selected patients.

2. Splendid results, in some instances not otherwise attainable, may be expected of mercurochrome in the treatment of severe, acute, coccus infections that have passed beyond the atrium of infection.

3. Good results following a primary injection of mercurochrome is no evidence that like results will follow a subsequent injection; nor is a mild reaction following a primary injection any criterion of the reaction that may be produced by a second injection.

While the observations herein reported are inadequate to even suggest the value, or lack of it, in treating cardiac and articular coccus infections with mercurochrome—they distinctly indicate the propriety of most carefully restricted and conservative employment of this drug in these cases.

## VARICOSE VEINS OF BROAD LIGAMENT\*

F. A. HUDSON, M.D.

ENID

The literature on this subject is not very extensive. Text books mention the condition and that is about all. I have been much interested in the condition since my attention was called to it several years ago by a case which simulated a submucous fibroid and which had bled until a prolonged stay in the hospital and several transfusions were necessary to get her in condition for operation. I operated this woman for a fibroid she did not have but she did have a tremendous pelvic varicocele.

The first reported case was by Cruvielheir in 1827, Reichet reported one in 1854. The pathology was given in 1858 by Duvaly. In 1881 Winchel reported the condition in three and one half percent of several hundred autopsies.

The first diagnosis made before operation was by Dudley and he reported four cases successfully operated in 1888. In 1897 Dr. Baldy reported a case successfully operated by him the diagnosis being made after opening the abdomen.

Three years ago I wrote a paper on this subject for this society but did not get to the meeting to read it. The following winter I saw an article from a San Francisco surgeon published in S. G. & O. The writer had apparently come to the same conclusion as myself and regarded the condition as a very common cause of trouble.

The etiology of the condition I do not definitely know but suppose that it may be due to anything which causes a pelvis congestion either active or passive and believe that the most common cause is pregnancy. I have not myself seen a case of any severity in a woman who has not been pregnant and believe that active inflammations are secondary factors. I believe that the condition long called subinvolution is another name for this condition. In other words the tremendous dilatation of the blood vessels incident to pregnancy remains after labor, infections, probably in many cases interfering with the return to normal. Probably the erect position interferes more with the involution of these veins than do infections. Once the condition is established, it has of necessity a tendency toward a continual exaggeration because of the dilatation of the veins with thinning of their

\* Read before Section on Surgery and Gynecology, Annual Meeting Oklahoma State Medical Association, Oklahoma City, May 13, 14, 15, 1924.

walls together with the dilitation of the valves, because of the erect position and because the passive congestion is conducive to engorgement of the uterus with increased weight and a resulting tendency to displacement. The passive congestion also necessarily lowers the vitality of the uterus and increases its susceptibility to infection—and so a vicious circle.

The veins of the broad ligaments lie in two groups, one beneath and parallel with the tubes and the other at the inner edge parallel with the axis of the uterus. The veins are normally not large and not prominent but we see women in whom, in the reclining position, the ligaments appear to be full of veins of tremendous size, perhaps as large in diameter as a pencil. In one case reported the little finger could be introduced into the lumen of some of the veins. Judging from the effect of the reclining position upon varicosities in the legs and scrotum how tremendous in size must such veins be when the woman is in the upright position? The veins themselves are very thin walled as can be often unintentionally demonstrated by attempting to dissect them from the peritoneal fold of the ligaments. It is said that such a vein may spontaneously rupture simulating the hemorrhage from an ectopic.

The secondary pathology is that of a passive congestion, first swelling and enlargement and secondarily degenerative changes due to poor circulation. It is closely analogous to the degenerative process incident to varicose veins of the legs. The devitalization and susceptibility to infection of the superficial tissues of the legs in a sufferer from ordinary varicose veins is a familiar thing to every doctor. And just so does the uterus undergo degenerative changes and lose its resistance to infection when its veins become permanently dilated.

There are too, I believe, degenerative changes in the ovaries, often manifested by an overgrowth of fibrous tissue throughout the ovary and the formation of small cysts, incident to this condition. The testicle undergoes slow degenerative changes in the presence of a varicocele, also the ovary.

The most common symptom is dull aching pain on standing, relieved upon lying down. There is backache with general pelvic discomfort and a sense of fullness and weight. The pain is sometimes more severe and may radiate towards the kidneys, sometimes to the coccyx.

The periods are usually profuse and prolonged and may simulate the hemorrhagic periods of a submucous fibroid.

On examination the musosa of the cervix and vagina are congested and often blue, the uterus is enlarged and tender, and there is often the sensation of a boggy indefinite mass to each side of the uterus. If she can be successfully examined standing this mass is much more easily felt. There is often a co-existing endometritis and metritis.

To prevent this condition sufficient rest in bed after labor or abortion is probably first in importance and next the prompt relief of misplacements and infections.

Once established, if not too severe the correction of a co-existing inflammation and malposition may give relief. In more severe cases the resection of the larger veins with correction of a possible malposition and possibly the curetting of the uterus and amputation of an infected cervix may be sufficient. In the old standing severe cases a supravaginal hysterectomy may be necessary to cure.

#### *To Conclude:*

Varicocele of the broad ligaments is a common condition. It is a frequent cause of pain and discomfort and sometimes of severe hemorrhage.

It results in degenerative changes in the pelvic organs and renders these organs susceptible to infection.

It is probably in most instances preventable.

In the milder cases medical treatment should be tried and conservative surgery in other cases, excepting the most severe, which will require hysterectomy.

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## TULSA: THE CONVENTION CITY

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OLGA MELTON

TULSA CHAMBER OF COMMERCE

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In 1920 a young physician, just discharged from the army, stepped from an incoming train at the Frisco station and looked over the city he was planning to make his home. So this was Tulsa—a town of 72,075 inhabitants, reputed to be the wealthiest town of its size in the country. That same doctor will attend the sessions of your 1925 Convention.

A week was spent in visiting clubs, churches, the Chamber of Commerce, and in getting acquainted with Tulsa. He thought Tulsa was more than it had been advertised but he found that the business and professional men were not satisfied with what was being done—they wanted to do more. They set their goal high. They realized that the city must have an adequate water system, that they needed more and better hotels, more schools





Skyline of Tulsa

and churches, larger parks and playgrounds, and they were planning with all their strength for the accomplishment of these necessities. Most important of all was the water question. The town was a "bottle baby"—had been and was being raised on the water bottle. The water supply for general purposes was obtained from the Arkansas River, but even after being filtered and treated in a modern plant was still so salty as to be undrinkable and so hard as to be unfit for industrial or domestic use. Further, the cost of bottled water, the expense of operating water softening plants, and the losses by deterioration of plumbing, boilers and other equipment was amounting to nearly a million dollars a year. This unsatisfactory water supply was undoubtedly a great disadvantage to the city. Plans had been made and were being carried out to bring water from the Ozark hills into the city but the people, yet, though doubting the success of the project were hoping to accomplish it.

And the hotels—the newcomer was appalled by the lack of hotel facilities. Outside of the Hotel Tulsa, the others were small, dilapidated affairs of two or three stories, with few rooms and absolutely incapable of taking care of even small delegations to meetings or conventions. Not being satisfied with these accommodations the progressive people were planning for larger hotels to be built to house

the many conventions they intended to bring here.

The theatres as a whole were not so bad—they were clean places and offered a great variety of entertainment. But Convention Hall, though large and roomy, was badly in need of repair and redecorating.

He heard people speak about St. John's hospital. This gaunt framework had been started several years before but had been abandoned due to lack of funds and so it stood high upon a hill in the southeast part of town, frowning down upon the city. Excepting this, the Oklahoma Hospital was the largest, best-equipped institution in the city. Tulsa had several other hospitals at that time, smaller but well-equipped. The new, uncompleted hospital was badly needed but the people were lax in their interest.

Tulsa had a splendid school system, though many of the buildings were old, they were being replaced by the newer type of unit schools. Even then the buildings were crowded. The new High School, just completed, was already far too small for the overflow of students and plans were being made to build a duplicate building. Tulsa had the Kendall College, old and respected, but far inadequate for the needs of the older students.

There were few paved or hard surface roads leading in or out of the city. At times the dirt roads to an adjacent city were almost



Tulsa in 1893

impassable and during the rainy days their condition was deplorable. However, these roads were now being graded and already were showing signs of improvement.

The parks were just sites set apart for children to play in. Very little equipment was installed, few slides, chutes, etc., for the pleasure of the children. The parks were all small and on Sundays and holidays they literally overflowed with children. A big community park was sadly needed.

A City Plan for the city had been talked of but only as something in the future, therefore, as yet the city had developed only in certain directions and at random.

That was all five years ago. Years when the progressive people fought hard for the projects they knew were needed to build Tulsa industrially, for big businesses, homes, hotels, parks and good roads. Now—Tulsa is the recognized oil capital of the entire World. It has a population of 113,118 (according to the latest report of the U. S. Bureau of the Census), a water system costing \$7,500,000 which brings an unlimited supply of pure, mountain water a distance of over sixty miles to her mains, giving the people plenty of soft water for domestic, industrial and drinking purposes and weaning her from the bottle.

People were being tagged today, tagged yesterday and tagged tomorrow for drives for every imaginable purpose. You could not walk down the street without being stopped several times and begged to purchase a tag for some worthy or worthless cause. Few people had heard of a Community Fund—where one might give once for all charities.

It is the metropolis of the state, the center of the state's most dense population and the center of that section that is increasing most rapidly.

Tulsa is known nationally for her schools. With an enterprise representing an investment of \$6,650,000 and a yearly expenditure of \$1,500,000, a teaching force of 612 men and women and an enrollment of 19,000. In addition to the public schools, now adequate for all grade school children, the Central High School, now doubled in size and capacity, which is one of the largest and best equipped in the United States, Tulsa had the University of Tulsa with a splendid gymnasium, Robertson Hall for Boys and Kemp Lodge for Girls, two parochial schools and numerous private schools.

Tulsa is not only a city of big business, unsurpassed schools and lovely homes, but it is also a city of beautiful and commodious church buildings. Catholics, Protestants, He-

brews and Christian Scientists are well represented in Tulsa. There are forty-five church edifices in the city, representing physical equipment valued at \$4,000,000 and having a membership of 30,000.

Tulsa is the hub of hard surface roads. There are one hundred and forty miles of concrete highways in the county leading out of Tulsa. Numerous bus lines handling both freight and passengers maintain regular schedules.

Now Tulsa has excellent hotel facilities. The largest, the twenty-story five hundred room Mayo Hotel has just been completed. Hotel Tulsa has three hundred guest rooms and the Wells, one hundred thirty-eight guest rooms. Any one of these would make excellent convention headquarters and all are new and modern in every detail. In addition to these, there are ninety-two others of varying sizes.

The St. John's hospital, so long an affront to the pride of all true Tulsans has been financed and is being rapidly brought to completion. When completed this magnificent structure will stand proudly overlooking the city which made it possible. It is constructed with five wings and so planned that every room will have outside windows. This, added to the Oklahoma Hospital so splendidly constructed and equipped, and the various other well equipped hospitals will indeed raise Tulsa in the eyes of the members of the State Medical Association.

The first Community Chest drive held last April went over the top with splendid success. The people approved the idea of giving once to all the various charities and over-subscribed to the Fund. Again, this year, they showed their interest and approval by donating \$298,870.98 to the combined list of agencies. Tulsans are always generous to such a worthy cause.

Tulsa now is being developed along orderly lines, carefully planned by the City and Regional Plan Commissions. Through the efforts of these agencies a Major Street Plan and a Zoning Ordinance have been adopted.

This is indeed a city of beautiful homes. The residential districts have been planned along most modern lines, and architecture and landscaping is of the best. Most of the residential section is carefully restricted.

Tulsa is justly proud of her theatres and playhouses. Convention Hall has been remodeled and is now splendid for large gatherings and conventions. The magnificent new Adkar Theatre, the largest in the city has just been completed by members of Akdar



Temple and is credited with being the most beautiful and complete theatre in the southwest. The theatres offer good, wholesome entertainment and recreation, the very acme of perfection in photoplays and screen service, that is only equalled in theatres of the largest cities. Tulsa also has the finest vaudeville house in the State, presenting feature acts from big time vaudeville circuits. These are additional incentives to pay the Magic City a visit.

Being located in the heart of the Mid-Continent Oil and Gas field, Tulsa is the headquarters of almost every oil company operating in this field. There are nine petroleum refineries in the city, valued at \$333,480,000 with a daily capacity of 64,000 barrels, and also firms manufacturing and handling every conceivable kind of oil well and refinery equipment. You should visit a refinery and an oil field while here.

Children's wading pools have been installed in most of the now well equipped parks, but it is Mohawk park that deserves your attention. It is the largest municipal park in the United States. Although located eighty miles from the mountains, yet it contains five miles of lagoons and a lake one hundred and fifty acres filled with sparkling, mountain water.

This is also the industrial center of the State, having one hundred and forty-five factories, making it the leading manufacturing city in Oklahoma. Excellent transportation facilities and the abundance of coal, fuel oil and gas within the city switching limits solves the fuel problem. Scarcely a week goes by without the arrival of a new industry or the enlargement of an existing one.

And so—in 1925, we welcome you to Tulsa, the Oil Capital of the World, and request the pleasure of showing you the city which is the metropolis of Oklahoma.

#### ALWAYS ONE MORE BUREAU

That consuming passion for erecting one more bureau—and always one more bureau—in the government at Washington was never more grotesquely illustrated than in a certain passage of one of the recent reports of the new \$50,000 commission of inquiry into agriculture.

This commission discovers that there are overlappings of jurisdiction and duplications of work among the existing government bureaus. What, then, does it recommend? Why, of course, it recommends the establishment of a new branch, a new "intradepartmental agency," the duty of which shall be "to study this matter and to promote intradepartmental coordination."

Thus the commission contrives on its own account actually to suggest a new overlapping and duplication. It suggests a bureau for coordination when already, as a matter of fact, there are now two such bureaus, simultaneously operating.

One of them is the bureau of efficiency. Among the very first duties of this bureau is that of investigating "duplications of work." In the last fiscal year it made ninety-one inquiries into such duplications. Then there is the bureau of budget. One of the supreme continuous efforts of this bureau is the coordination of the work of all the other bureaus and departments in Washington. The bureau of the budget has a chief coordinator. It has a deputy chief coordinator. It has a half dozen assistant chief coordinators. It has a little flock of "coordinating boards." Finally, out through the country it has "area coordinators."

Now comes the commission on inquiry into agriculture with the recommendation that there be established a third bureau for coordination!

The next logical move would be, of course, to erect a fourth and supreme coordination bureau which would coordinate the three coordination bureaus already in existence.

Congress might offer a reward to any federal commission which can conclude its inquiry and adjourn without trying to plaster another barnacle bureau on the previously impeded hull of the ship of state.—Chicago Daily News.

The above is clipped from the Bulletin of the American Medical Association and reproduced here as indicative of the trend of the times. We agree that we are already overburdened with Bureaus for this and that, and we need no more.

#### COMMITTEE CHAIRMEN FOR THE TULSA MEETING

**Dr. Roy W. Dunlap, General Chmn.**  
**610 Palace Bldg.**

Dr. R. Q. Atchley,.....Entertainment  
315 Palace Bldg.

Dr. C. A. Dillion,.....Badges  
304 Palace Bldg.

Dr. C. T. Hendershot,.....Hotels  
19 Old Daniels Bldg.

Dr. W. A. Cook,.....Meeting Places  
506 Palace Bldg.

Dr. C. H. Haralson,.....Exhibits  
527 Wright Bldg.

Dr. H. P. Price,.....Stereopticons  
711 Bank of Commerce Bldg.

Dr. A. W. Pigford, Hospitals & Clinics  
510 Palace Bldg.

Dr. C. H. Ball,.....Publicity  
11 Old Daniels Bldg.

Meeting Place: New Mayo Hotel  
5th and Cheyenne Sts.

16th Floor

May 12th, 13th, and 14th, 1925.

# THE JOURNAL

OF THE

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DR. CLAUDE A. THOMPSON..... Editor-in-Chief  
308 Barnes Building, Muskogee, Okla.

DR. P. P. NESBITT..... Associate Editor  
814 Surety Building, Muskogee, Okla.

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### EDITORIAL

## HERNIA AND STATE COMPENSATION LAWS

It is interesting to note the advanced stand taken in some states as to compensability for so-called traumatic hernia. In general claims arising from this source have been allowed, but twelve states have passed laws requiring the following: substantial proof is demanded that there was an injury resulting in hernia (this is always a questionable matter in itself), that the injury was sudden and accompanied by pain and that the hernia immediately followed the accident and did not exist in any degree prior to the accident.

Five states have mandatory laws regarding treatment by radical operation. These laws provide that hernia "shall" be treated by surgical operation in order for the claimant to receive compensation. This provision is only modified in those rare cases where other physical disabilities or age would render the claimant a hazardous operative risk. As nearly all such cases are amenable to cure by successful operation under harmless local anesthesia it will be readily seen that ignorant prejudice and misinformation as to the gravity unreasonably supposed to exist by the ignorant will no longer operate to permit him to draw compensation for an injury easily corrected by a simple operation.

Practically all states prohibit an employer from demanding a signed release from defective workers of claims for damages which they might receive in the course of their employment. In many cases physical examinations are not required at the time of employment, and the employer has no means of knowing the state of health of workers beyond that which the worker himself wishes to disclose at the time of employment. So, we have the worker in many instances attributing to his employment origin of a hernia from trauma, which are known to the informed medical man to be extremely rare, in fact they nearly never so arise.

Nearly every such claimed hernia potentially existed before the time of alleged or real injury. Oklahoma is not listed as having such advanced legislation, and we can already hear the monumental mentality of some of our legislators declaiming against any such proposed invasion of the sacred rights of American citizenship. Nevertheless we should strive to gain the proper goal in this, as well as all other matters of proved scientific medicine and begin to insist that such cases be treated with the justice and correctness they deserve.

## THE GORGAS MEMORIAL INSTITUTE

Recently the writer heard the Gorgas Memorial Institute called the "Gorgas Monument". Upon the theory that the purpose of this organization may be misunderstood, we take pleasure in enumerating some of the purposes of the organization.

It is a permanent testimonial to one of America's greatest sanitarians and physicians, General William Gorgas, whose vast knowledge and practical application of that knowledge made possible the successful completion



of the Panama Canal, a feat up to the time regarded as a practical impossibility.

The Institute commemorating his greatness proposes to expose and render ineffective quacks and quackery so far as possible; it plans to help overcome pernicious teachings and ignorance regarding health matters; it will attempt to carry out and perpetuate General Gorgas' ideas of the exercise of preventive measures and the use of scientific medicine to check disease and wipe out pestilence. Through the income from five million dollars it will familiarize the public with the fallacies of cultists generally; carry proper health information to the individual through the pages of his daily newspaper, magazines, by moving pictures, lectures and the radio, and direct him to the proper source for medical advice, thus crippling the dishonest and designing who have so long victimized him.

There is hardly a limit to the eventual possibilities for the greatest amount of good to the greatest number when this organization gets upon a firm working basis. It is rapidly nearing the point when its power for great accomplishments will begin to be realized and appreciated. Every physician should try to keep informed on the work as it progresses and cooperate in every manner.

### *Editorial Notes—Personal and General*

THE PRESIDENT'S RECEPTION of the next annual meeting at Tulsa, will be held at Akdar Shrine Mosque, Wednesday evening, May 13th.

BECKHAM COUNTY MEDICAL SOCIETY will meet at Sayre on April 7th, in a public meeting, at which a number of speakers from over the state will make addresses.

OTTAWA COUNTY MEDICAL SOCIETY held its monthly meeting at the Miami Baptist Hospital, March 5th, with Dr. P. P. Nesbitt, Muskogee, as the principal speaker.

DR. G. W. WILEY, Norman, was elected president of the Norman Golf and Country Club, and Prof. L. A. Turley, Norman, a director, at a recent meeting.

PAYNE COUNTY MEDICAL SOCIETY held an infant clinic March 11th, at Ripley, Dr. William M. Taylor, Oklahoma City being in charge. Some dozen different infant conditions were evident in the children present. Drs. R. T. Edwards and Clark H. Hall, Oklahoma City, assisted.

DR. WILLIAM H. BAILEY, Oklahoma City, heretofore director of the Bailey-Keller Laboratories, has withdrawn from this concern, which is now known as the Medical Arts Laboratory, and will now give his entire time to the Wesley Hospital Laboratory, of which he has been director since 1916.

DR. A. C. BYARS, Wilburton, has removed to Dow, Oklahoma.

DR. T. F. GROSS, Lindsay, recently attended the Sante Fe Railroad physicians and surgeons meeting at Temple, Texas.

DRS. LAIN & ROLAND, Oklahoma City, have moved to the new Medical Arts Building, from the Patterson Bldg.

THE MIGRATION to the new Medical Arts Building in Oklahoma City has begun, several practitioners having already made the move.

DRS. JOHN A. HAYNIE, Durant, and WALTER D. HAYNIE, Kingston, are in Chicago for one month's special post-graduate course.

THE WEEDN HOSPITAL, Waurika, which was partially destroyed by fire, has been rebuilt, and newly equipped.

DR. J. C. BUSHYHEAD, Claremore, is visiting Will Rogers in New York, while taking a post-graduate course.

DR. and MRS. ALLEN LOWERY, Blackwell, returned recently from a five week's tour of Florida and Cuba.

DR. H. K. SPEED, Sayre, was hi-jacked in his garage last month after returning home in the evening, being relieved of only a few dollars.

DRS. COLWICK AND COLWICK, Durant, are erecting a two story building to be used as a nurses' home, making room for many more patients at their hospital.

DR. R. D. LOWTHER, Norman, had his Buick car stolen from in front of his residence March 9th; the medicine case in it at the time was later found in Oklahoma City.

DR. W. H. Davidson, Cushing, has received an appointment as Assistant Surgeon of the Katy Railroad at Cushing, having charge of the Eye, Ear, Nose and Throat department.

WOODS COUNTY MEDICAL SOCIETY has prepared a program for the entire year's meetings, consisting of two original papers, with discussions, at each meeting.

DR. HENRY S. BROWNE, Tulsa, went to Baltimore the latter part of March, for an extended stay, to work under the direction of Dr. Hugh H. Young at the Brady Urological Institute, Johns Hopkins Hospital.

THE ANNUAL MEETING of the Oklahoma State Medical Association will be held entirely at the Mayo Hotel, Tulsa, including Section meetings and commercial exhibits and registration. Reservations should be made at once for hotel accommodations, to Dr. C. T. Hendershot, chairman Hotel Committee, 19 Old Daniels Bldg., Tulsa.

DR. THOMAS A. LOVE, Ripley, represented the Payne County Medical Society before the Stillwater Lions Club at a dinner March 17th. This Lions Club is sponsoring clinics in the west half of Payne County, at which the county practitioners are invited to assist.

ROGERS COUNTY MEDICAL SOCIETY met March 16th at the Memorial Hospital, Claremore, with Dr. William P. Fite, Muskogee, as the principal speaker, who read a paper on "Bone and Joint Inflammation" with lantern slides, and Dr. Chas. A. Ball, Tulsa, with a paper on "Skin vs. X-Ray". The meeting was well attended by the membership, with several out of town visitors.

THE TULSA ACADEMY OF OPHTHALMOLOGY and OTO-LARYNGOLOGY, at its March meeting, elected the following officers for the ensuing year: President, Dr. T. W. Stallings; vice-president, Dr. Chas. H. Haralson; secretary-treasurer, Dr. W. A. Huber. Dr. Wm. T. Jones read a very interesting paper on "Sympathetic Sphthralmia" which was freely discussed by the members present.

THE INTERSTATE POST-GRADUATE ASSEMBLY Clinic Tour of American Physicians to Canada, the British Isles and France, has already enrolled 375 physicians to make the trip, which, together with members of their families, totals 625 so far enrolled to make the trip, forty-one States being represented. Two ships have been chartered, the "Ausonia" of the Cunard Line and the "Doric" of the White Star Line. Both are fine new one cabin ships with excellent appointments. Members of the medical profession in good standing in their State Medical Societies and members of their families are eligible to make the trip. Further information can be obtained from Dr. Wm. B. Peck, Managing Director. Freeport, Ill. Dr. William J. Mayo, Rochester, Minn., is President of Clinics of the Assembly.

THE AMERICAN BOARD OF OTOLARYNGOLOGY—The American Board of Otolaryngology will hold its first examination during the Meeting of the American Medical Association in Atlantic City, May 25th to 28th.

According to the rules of the Board, applicants are divided in three classes.

Class 1. Those who have practiced Otolaryngology ten years or more.

Class II. Those who have practiced Otolaryngology five years and less than ten years.

Class III. Those who have practiced Otolaryngology less than five years.

The type of examination is different for each class.

The Secretary, Dr. H. W. Loeb, announces that thus far over three hundred applications have been made.

## BRYAN COUNTY SOCIETY ON MEDICAL DEFENSE

Whereas, Medical Defense has been considered by the profession of the State as one of the necessary safeguards to the profession against malpractice suits; and

Whereas, The membership of the State Medical Association, no doubt are depending upon this fund for protection in case a suit should be filed against them; and

Whereas, It is likely that many do not know just the amount of protection that is

allowed from this fund; as now managed, there is allowed One Hundred Dollars as a maximum amount that can be expended from this fund in any one case. It will be recognized that this amount is wholly inadequate, in fact, will not make a respectable beginning in defending a suit of this character; and as a limitation to the amount of One Hundred Dollars will prove harmful, as many who have been depending upon the medical defense would doubtless secure ample protection from other sources. At the last meeting of the State Medical Association there was in the defense fund over Four Thousand Dollars. Now, therefore, be it

RESOLVED: By the Bryan County Medical Society in regular session, this March 10th, 1925, that we most respectfully request that this matter receive the attention by the officers of the State Medical Association that its importance demands, and be it further resolved that a copy of these resolutions be forwarded to the Editor of the Journal of the Oklahoma State Medical Association with request that same be published in the next issue of the Journal.

The above Resolution was unanimously passed at the meeting of the Society on the 10th day of March, 1925.

H. B. FUSTON, President,  
JOHN A. HAYNIE, Secty.

## TUBERCULOSIS

Edited by L. J. Moorman, M. D.

611 1st Nat'l. Bank Bldg., Oklahoma City

THE CLASSIFICATION OF ARTIFICIAL PNEUMOTHORAX AND THE CLINICAL VALUE OF THE SEVERAL TYPES.—Ralph A. Bendore. The American Review of Tuberculosis, January, 1925.

Confusion of terms existing in the nomenclature and inclusion of all types of cases with no mention of the type of pneumothorax used have rendered the existing statistics of little value. In estimating the clinical value of artificial pneumothorax and in compiling statistics of value, the type of pneumothorax used, the type of case treated and the immediate and ultimate results must be known and studied.

The elasticity of the lung tissue, that is its contractile and expansile force, is the chief factor in the ventilation of the normal lung tissue. The other factors in inspiration and expiration work to give this elasticity the greatest play. Either the contractile or the expansile force may be weakened by mechanical or pathological conditions or both may be equally affected. Normally the lung hanging freely in the vacuum of the air-tight thoracic cavity is stretched by the action of the atmospheric pressure against the negative intrapleural pressure. Its natural tendency to collapse is overcome by this negative intrapleural pressure, thus any disturbance of this pressure allows the



elastic lung tissue to contract in direct proportion to the rise in the intrapleural pressure. In slightly invaded pulmonary tissue the expansile force tends to be more affected than the contractile, when the disease is far advanced all elasticity is lost.

When small amounts of air are introduced into the pleural cavity the negative intrapleural pressure is overcome and the lung collapses itself. If the intrapleural pressure remains negative after the inflation, the lung becomes only slightly collapsed and retains much of its expansibility. This is known as expansile pneumothorax. When enough air is introduced to equalize the intrapleural pressure to the atmospheric pressure and thus neutralize the contractile and expansile forces of the lung tissue, complete rest of the lung, or static pneumothorax is obtained. The lung is actually compressed only when enough air is introduced to render the intrapleural pressure positive or above the atmospheric pressure. This condition is known as compression pneumothorax. Since the mediastinum is pushed toward the untreated side thus causing an increase of pressure there, compression pneumothorax can rarely be obtained unless it is firmly fixed. This increase of pressure on the untreated side is noticeable only when the intrapleural pressure is above zero.

There is a close connection between the pneumodynamics and the hemodynamics or artificial pneumothorax and the success of the treatment depends largely upon the adequate compensation of the circulatory apparatus. Expansile pneumothorax makes the fewest demands upon the heart since the deflation of the uninvolved portions of the lung is only partial and fewer changes take place in it. The calibre of the pulmonary blood-vessels is greatly reduced in static or pneumothorax of the rest and resistance to the ingress of blood is increased. This is overcome, however, if the right ventricle compensates properly and permanent atelectasis and atrophy of the lung tissue is avoided. In compression pneumothorax the blood-vessels become entirely constricted or obstructed and only a very small volume of blood is forced thru the lung even with the best cardiac compensation.

Expansile pneumothorax is the choice of treatment in early cases since it throws very little respiratory burden on the other lung, causes few circulatory changes and affects the mediastinum very slightly. There is no question as to when to allow the lung to re-expand since this process goes on constantly from the first treatment. The collapse of the diseased portion and the expansion of the uninvolved portion go on together till the expansile part has compensated sufficiently to entirely replace the collapsed tissue. It therefore offers a more complete functional and anatomic recovery than any other type of treatment. Static or pneumothorax of rest is a transitional stage only. Compression pneumothorax is a palliative measure and does not offer any such results as may be looked for from expansile pneumothorax.

#### THE PATHOLOGY OF ARTIFICIAL PNEUMOTHORAX IN PULMONARY TUBERCULOSIS.

—Leroy U. Gardner. *The American Review of Tuberculosis*. January, 1925.

In the fifteen cases treated by artificial pneumothorax and later coming to autopsy which are studied here the duration of compression varied

from twenty-four hours to three years and seven months. The lapse of time between cessation of treatment and death varied from one month to eight years. Three cases had had thoracoplasty. The duration rather than the degree of pressure seems to control the anatomic alteration which is also dependent upon the extent and degree of injury by the disease. The changes produced in the normal tissue by compression do not seem incompatible with rapid re-expansion and normal function. Among the anatomic changes produced by compression are: the development of a fibrosis in the pleura, in connective tissue coats of the blood-vessels and in the bronchi accompanied by a lymph stasis manifested especially at the periphery of the lung. Dilatation and hypertrophy of the right heart, endarteritis and thrombosis are frequent. The disease may extend thru the collapsed lung by way of the air passages, or rarely, by the lymph channels. Actual hastening of the healing process in the tuberculous portions seems mostly responsible for the therapeutic benefit derived from artificial pneumothorax.

#### OBSERVATIONS CONCERNING THE CONTRALATERAL LUNG IN PULMONARY TUBERCULOSIS TREATED BY ARTIFICIAL PNEUMOTHORAX.—Ray W. Matson, Ralph C. Matson, and Marr Bisailon. *The American Review of Tuberculosis*. January, 1925.

The condition of the contralateral lung in the 423 artificial pneumothorax cases studied here is classified as, essentially negative 97, deep peribronchial infiltration 103, disseminated bronchogenic caseous extensions 40, active fibrocasseous infiltration 134, and quiescent fibrocasseous infiltration 49. Of the 97 cases with an essentially negative contralateral lung 56 received satisfactory collapse. Of these 52% are clinically well, 11% arrested and 14% are dead. Of the 49 of the 103 cases with deep peribronchial infiltration in the contralateral lung which received a satisfactory collapse, 45% are clinically well, 24% arrested and 20% are dead. Of the 40 disseminated bronchogenic caseous extensions 15 received a satisfactory collapse, of which 26% are clinically well, 26% arrested and 33% are dead. Fifty of the 134 cases having an active fibrocasseous infiltration received a satisfactory collapse, of which 48% are clinically well, 22% arrested and 22% dead. Twenty-one of the 49 cases with a quiescent fibrocasseous infiltration had a satisfactory collapse, of which 50% are clinically well, 24% arrested and 20% dead. Of the 16 essentially negative cases with no free pleural space 25% are clinically well, 6% arrested and 56% are dead. There were 21 cases with deep peribronchial infiltration having no free space, of these 4% are clinically well, 13% arrested and 43% are dead. Of the 4 disseminated bronchogenic caseous extension cases with no free pleural space, 75% are dead, none clinically well or arrested. Of the 25 active fibrocasseous infiltration cases with no free pleural space, none are clinically well, 12% are arrested and 76% are dead. Of the 12 quiescent fibrocasseous infiltration cases with no free space, 16% are clinically well, 16% arrested and 33% are dead. A study of these figures shows that the disseminated bronchogenic caseous extensions in the contralateral lung offer the most unfavorable prognosis even in the presence of a satisfactory collapse.

A classification of the condition of the opposite lung is very necessary not only as a basis

for an accurate estimate of the end-results of the treatment but as a guide in the selection of cases to be treated. While the character of the collapse and the type of disease in the worst lung are the principal factors in the end-results of the treatment, the various types of contralateral lung lesions have great prognostic value. Disease of the contralateral lung is not necessarily a contraindication for collapse therapy, but great skill, care and study of both lungs are demanded in selecting cases with bilateral involvement for collapse. Good results are often obtained by cautious collapse with close observation of the other lung.

### ORTHOPAEDIC SURGERY

Edited by Earl D. McBride, M. D.  
1006 First Nat'l. Bank Bldg. Oklahoma City

#### 1. CLINICAL CASE RECORD—H. B., age 14, Female White, Infantile Paralysis Club Foot.

**History:** At age of three months had a fever for a few days and vomited once or twice. On the third day her legs seemed helpless. The right leg gradually recovered from the paralysis but the left knee and foot have remained weak. About three years ago the left foot began to turn and has had to use crutches ever since.

**Examination:** Left foot is inverted into an equino-varus deformity. She walks on outer side of foot and ankle but this is painful. A large cal-



After and Before Correction of Deformity.

lus has formed over region of the cuboid bone. She has power of inversion through action in anterior and posterior tibial muscles. The tendo-achilles is very strong and markedly contracted. All other muscles of leg and foot are inactive. The thigh extensors and flexors are active but the internal rotators of the hip are inactive. The circumference of the left leg averages one inch less than the right and length of left leg from anterior superior spine of ilium to internal malleolus is one inch shorter than the right.

**Operation:** December 7th, 1922. Under general anesthetic foot was manipulated and by the aid of tenotomy of plantar fascia and tendo-achilles the deformity was corrected. The anterior tibial was then transplanted to the outer border of the foot. A plaster cast was applied from toes to groin.

**Progress:** Four weeks after operation cast was removed and wound dressed. Another cast was applied to knee and patient allowed to walk. At the end of four weeks a brace was applied. The brace consisted of a metal foot piece with two upright leg bars, the ankle joints of which were limited so as to keep foot at a right angle. A Shoe was secured which fit over the brace. One year later walks without a brace.

**Discussion:** This is one of the most favorable types of infantile paralysis deformities to correct. If the quadriceps muscle had been paralyzed there would have been no control of the knee and the patient would always have to wear a brace to keep knee straight when walking, or else have it ankylized by surgery. Transplanting the anterior tibial muscle to outer border of the foot always gives a good result if it is strong enough to balance the posterior tibial on the inner side.

#### 2. SYNOVECTOMY OF THE KNEE JOINT IN CHRONIC ARTHRITIS. Ellis Jones. Jour. Am. Med. Assn., Nov. 10, 1923.

This procedure is offered in selected cases of chronic knee joint arthritis.

Arthritis deformans, pyogenic arthritis, and the acutely proliferative type of so-called atrophic arthritis positively contraindicate synovectomy. The author uses the split patellar incision as it permits of immediate post operative mobilization. Full function is usual at the sixth week. Twelve cases are reported.

#### 3. AMPUTATION IN CASES OF ANTERIOR POLIOMYELITIS. E. Muirhead Little. British Med. Journal, February 16, 1924, p. 292.

During the last three or four years amputation of the thigh in cases of extensive infantile paralysis has been performed much more frequently than was the case before the war.

This is justifiable when undertaken for septic ulceration or gangrene, but it is seldom that a prosthetic appliance improves function. A case is reported of amputation through the condyles in which all the muscles attached to the femur were hopelessly paralyzed. Even the flail limb can be benefited by stabilizing operations, supplemented by the use of walking instruments; this is much more forcibly the case when some active muscles remain. Amputation should on no account be done unless the surgeon is "very sure indeed" that in the end his patient will be better off.

### BACTERIOLOGY and PATHOLOGY

Edited by Wm. H. Bailey, A.B., M.D.  
Wesley Hospital, Oklahoma City

#### CARBON MONOXIDE IN MOTOR EXHAUST GAS.—Journal Industrial & Engineering Chemistry, October, 1924.

Experiments in a closed garage showed that after engine ran six to seven minutes, there would



be 0.20% CO which if engine stopped would cause unconsciousness in thirty to forty minutes. If engine is racing or is warming up, after six minutes air would contain 0.50% CO, an amount necessary to cause unconsciousness in the time required to produce it.

#### Wholesale Motor Gas Poisoning

Party of seven adults and six children in motor boat. Nine developed symptoms of poisoning, while all were sitting on the open deck back of the cabin. Two who went to lie down in the cabin, died. A leak in the pipe allowed the exhaust gas to escape into the cabin, where the high walls helped to retain it. Door of cabin was open. The necropsy first revealed poisoning. It had till then been a mystery.

#### Carbon Monoxide Poisoning

In another case twelve men were found on the floor of a covered truck, all unconscious. Eleven recovered when taken out into the air and one died. The case of exhaust gases from motor cars is very important and there should be no leaks.

In a recent case a doctor went to his garage and started the motor and then went out for not over 10 minutes. In the meantime some children went into the building and closed the door. When the doctor returned he found the three children on the floor unconscious. Symptoms were vomiting, throwing back the head, dilated pupils. All recovered, but one only after some days.

#### Carbon Monoxide in Vienna Gas.

In eleven months in 1923, there were 246 cases with 69 fatalities. Use of a volatile mercaptan is suggested so as to give warning by its odor, one gm. per 6,500 cu. ft. of gas, is enough. It is stated that in Vienna in 1924 industrial and accidental poisoning was increasing while criminal poisoning was decreasing.

#### Tetra Ethyl Lead Poisoning

Poisoning by tetra lead has recently attracted much attention on account of deaths in New Jersey of many persons and severe illness of a much larger number. This is not similar to lead poisoning. The symptoms of tetra ethyl lead poisoning are an acute inflammation of the brain, particularly of the meninges or membrane covering the brain. The patient has more or less nausea, vomiting, persistent insomnia. He is nervous, restless, feels tired, loses appetite and weight rapidly. The pulse rate falls frequently to subnormal temperature. Anaemia develops rapidly. In severe cases there is acute delirium, the patient having delusions of persecution, shouts and raves. This substance was first made in 1854, but has not been noticed especially until it was suggested for improving the efficiency of gasoline motors, the statement being made that its use would conserve the world's supply of gasoline by approximately one-fourth. It is used in extremely dilute form, usually one to one thousand. This poison enters the body first by absorption through the skin; second, through inhaling fumes, third, through inhaling lead dust, but in this case it would be simply lead poisoning.

#### Lead Poisoning

(Complete articles in Jr. A. M. A. Vol. 83, p 580)

By Doctors Shie, Hamilton and others. Lead has great affinity for the bones which retain it. If absorption ceases and the subject returns to normal conditions practically all the Pb becomes

localized in the skeleton and is held in a temporary harmless deposit. Damage by the lead occurs during the transportation and not during storage.

#### Alcohol Poisoning

"Canned Heat" is denatured alcohol, which is used as a source of heat for lamps. It has caused numerous deaths when used. It is solidified by use of either stearic acid, synthetic tri-stearine, sodium sebate, cellulose-tetra-nitrate, soap or lac. The alcohol is separated by filtering through cloth. Death probably from cardiac failure.

**The Whole Truth About Alcohol** by Dr. Abraham Jacobi, Vol. 83, McMillan Co., 1919. (See Book).

#### Poisoning by Fluo-Silicic Acid

Recently (1924) in Germany a dozen people have been poisoned by this acid. It is used in vermin exterminators and disinfectants. A small child drank of a liquid given to the maid to rid the place of bugs, and died in five minutes. The liquid was called "Kerman" and was used in fighting foot and mouth disease. It was found to contain 22.5% of fluo-silicic acid.

#### The Danval Arsenic Case

Case tried in Paris 46 years ago and conviction was largely based on belief that arsenic was not a constituent of the body. A. Gautier, in 1899 demonstrated that As was normally in the body. The state paid Danval 20,000 francs, and gave him a life annuity of 13,000 francs. He had passed 24 years in prison.

#### Morphine Poisoning

The injection of a 1/2% solution of KMnO<sub>4</sub> or intravenous infusion of a 0.1% solution in physiological NaCl solution has proved valuable. The illegal use and smuggling of cocaine and morphine in Austria is terrible (1924). One dealer had sold and transported 501 kilograms of morphine into Hungary—enough to narcotize the whole population of central Europe. It is estimated that 150 Kg. of cocaine had been "snuffed" in a single year, and there are 1200 addicts. A harvest of crime, of course, followed.

#### Zinc Poisoning

Two hundred persons were poisoned at one time near London by the use of apples cooked in galvanized iron buckets in iron steamers. Fruit acids dissolved off the zinc from the galvanized iron. 1,200 bottles of root beer examined also, contained zinc in proportion 3.3 grains per 15 oz. bottle.

E. H. S. B.

**"SEROLOGIC SIGNIFICANCE OF STREPTOCOCCI IN ARTHRITIS AND ALLIED CONDITIONS"**, Dr. Burbank and Hadjopoulos, N. Y. Jr. of A. M. A., Feb. 28th, 1925.

Since the complement fixation work of Bordet and Gengon on typhoid in 1901, the usefulness of this general principle in diagnosis has been gradually widened to include other diseases. The difficulties which have had to be overcome are: 1—The inability of securing a sufficiently active antigen; 2—the deleterious affect on anti-bodies in heating the serum during inactivation; 3—the failure of the infecting organism to sufficiently stimulate the formation of anti-bodies or the inability of the infected individual to manufacture sufficient anti-bodies to be able to be demonstrated.

By overcoming the first two difficulties, in part, at least, the authors have evolved a method of sufficient sensitiveness and specificity to permit the serologic study of infective arthritis and allied pathological conditions.

The authors have, as a result of their investigations classified the infective arthritides which include the arthritic and rheumatoid conditions, into three clinical entities, which are also separate from the serologic point of view. These 3 types are:

- (1) Acute or sub-acute exudative peri-arthritis.
- (2) Aniso-artrophic exudative peri-arthritis (arthritic deformans).
- (3) Sub-acute or chronic productive osteo-arthritis, (Hypertrophic arthritis.)

#### Summary and Conclusions:

- (1) Serological classification:
  - (a) Arthritis reacting to hemolytic streptococcus. This type in its pure form is peri-articular.
  - (b) Arthritis reacting to hemolytic streptococcus but of different fixing properties. This type is the deformans group.
  - (c) Arthritis reacting to streptococcus viridans. This type is the osteo-arthritis or productive form.
- (2) The majority of arthritic cases that are not arrested or cured early in the course of the disease have a tendency to undergo further changes leading to mixed types.
- (3) A fair per cent of arthritis patients especially those suffering with colitis or chronic constipation have a marked tendency to effect complement fixation in certain strains of non-hemolytic streptococci isolated from the intestinal tract of similar arthritic cases.
- (4) Certain pathologic conditions have long been known clinically to be precursors of arthritis. Serologically they have confirmed those clinical observations.
- (5) The test is not diagnostic of arthritis alone but is diagnostic of a wide group of acute and chronic infections, many of which are marked foci, that give rise to anti-streptococcic bodies in the patient's serum.

W. H. B.

### EYE, EAR, NOSE and THROAT

Edited by Jas. C. Braswell, M. D.

726 Mayo Bldg., Tulsa

#### THE TREATMENT OF UNILATERAL HARELIP WITH SPECIAL REFERENCE TO ASSOCIATED DEFORMITY OF THE NOSE.—Coleman, C. C., Virginia, M. Month, 1924, ii, 393.

Operation for harelip should be performed early in order that the result may be improved by the development of the external nose. If there is a complete cleft of the lip and alveolus, the alveolar cleft should be closed first. This can be done by uniting the borders with a wire suture. To obtain proper alignment and unite the alveolus in older children it is generally necessary to produce a greenstick fracture of the longer segment and wire it together in position.

Usually, even after wiring the alveolus, there is some flattening of the upper lip just over the end of the shorter segment. This flattening is a factor in the nasal deformity, but as yet no

entirely satisfactory method of overcoming it has been devised.

In some cases of cleft palate and unilateral harelip the larger segment of the alveolar arch is rotated so that the incisor teeth project almost horizontally, and the alveolus is in contact with the opposite segment. This type of deformity causes marked deviation of the nose and is not corrected by operation upon the alveolus itself.

#### THE INTRACAPSULAR METHOD OF CATARACT EXTRACTION.—Barraquer, L., Brit. M. J., 1924, ii, 660.

The author states that methods of intracapsular extraction of cataract may be classified into two large groups—those that remove the cataract by traction and those that expel it by pressure. In the development of the vacuum method, the results were at first poor, largely because the traction on the lens frequently causes rupture of the zonule at the ciliary attachment. Hemorrhages and inflammation in this region resulted. To prevent this complication it was necessary to break the zonula at its lens insertion. This was accomplished by producing vibrations in the vacuum which were not sufficiently strong to be transmitted the full length of the zonular fibers to their peripheral insertion. After the cup was applied, a nearly instantaneous diminution in the maximum diameter of the lens was obtained.

#### A MODIFICATION OF THE USUAL METHOD OF NEEDLING THE LENS CAPSULE AFTER CATARACT EXTRACTION.—Lang, B., Brit. J. Ophth., 1924, viii, 459.

The author describes three very important points of technique in needling the lens capsule after a cataract extraction.

The first point is the selection of a needle which is not too long and has a shaft sufficiently large to prevent the escape of aqueous fluid during the operation. The second is the route of entrance into the anterior chamber. Lang uses a subconjunctival route, taking great care not to injure Tenon's capsule; the route is shown in an illustration. The third point discussed is the method of entering the anterior chamber. The author weaves his knife among the remaining threads of the capsule and then turns it before attempting to cut the fibers. Frequently it is necessary to do this two or three times to reach all of the fibers at various levels. As the result of this method the anterior hyaloid membrane is preserved so that the vitreous humor does not enter the anterior chamber and the chance of secondary glaucoma is decreased.

#### THE MEDICOLEGAL VALUE OF ROENTGENOGRAPHY OF THE MASTOID IN A CASE OF RADICAL OPERATION.—Ferreri, G. Arch. Internat. de laryngol., 1924, xxx, 650.

After a radical mastoid operation a physical examination is apt to mislead because of the uncertainty of the operative extent of bone destruction, the post-operative stenosis or pronounced deviation of the canal, the invasion of the operative field by newly formed fibrous tissue and recurrent or persistent caries. A roentgenogram, therefore, gives the most valuable evidence. Although the x-ray examination may not always be sufficient for a diagnosis of the petromastoid dis-



ease, it is important in establishing the topographical condition of the bone after radical operation.

At the time of the radical operation Ferreri fills the cavity with a substance impermeable to the roentgen rays. Semisolid Beck's paste is not suitable because it is difficult to remove. The author employs a narrow gauze strip impregnated with a mixture of barium sulphate and gum arabic in water. The gauze thus prepared is sterilized, dried with moderate heat and kept sterile for use. At operation the cavity and all of its recesses up to the limit of the cartilaginous canal are packed with the tape. Two x-ray views are taken, one in the transverse oblique direction and the other in the oblique sagittal direction. The first view shows the amplitude and the second the depth. Both show the shape of the operative cavity.

To emphasize the importance of the x-ray in showing the extent of the operation to the surgeon and in serving as medico-legal evidence, Ferreri reports a case of chronic petro-mastoid disease in which supposedly a radical operation had been performed but only a skin incision had been made.

### OBSTETRICS and PEDIATRICS

Edited by Carroll M. Pounders, M. D.  
532 Liberty National Building, Oklahoma City

#### A STUDY OF THE 1923 EPIDEMIC OF ANTERIOR POLIOMYELITIS IN KANSAS.—Rex L. Diveley, M. D., J. A. M. A., Jan. 10, 1923

The author concludes from a study of 148 patients—studied during a period of one year—that if an early diagnosis is made, and proper treatment instituted during the febrile stage, the resulting cord involvement is not only lessened, but in a great percentage of cases prevented. If proper treatment is carried out during the second or convalescent stage, from 75% to 85% of the cases will show marked improvement or complete recovery, against 40% to 45% of partial recovery if proper treatment is not carried out. If proper treatment is carried out during the first and second stages, fully 90% of the deformed limbs and backs can be prevented. Many cases recover spontaneously without treatment, while others still show signs of paralysis after one year of careful supervision. There are definite anterior poliomyelitis carriers. The infection is selective and may run through neighborhoods or families, picking out various individuals. It is thought that most persons in a community during an epidemic have the disease in the light or abortive form, which gives immunity.

#### A CLINICAL REVIEW OF INTUSSUSCEPTION WITH REPORT OF CASES.—Eugene H. Smith, M. D., Archives of Pediatrics. Nov. 1924.

It is pointed out that intussusception is not a rare disease, yet the average physicians personal experience is limited to only a few cases. The diagnosis is sometimes overlooked. The ten cases reported show an unusual uniformity of symptoms. In all, the onset was sudden; all had intermittent pain, vomited, showed some degree of shock, passed bloody stools, and presented a tumor. Variations were greatest in the degree of shock and the amount of blood passed. The symptoms

seemed to have no constant relation to the length of the bowel involved or to the condition of the intestine. All cases were operated upon promptly, except one, in which the infant was not seen until after the lapse of three weeks, and the condition considered hopeless. In no case had there been a delay of more than twenty-two hours after the first symptom. Of the nine cases which came to operation, four died; one in a few hours from shock, operated upon twenty-two hours after the onset of the trouble; one from toxemia twenty hours after operation, and two apparently from peritonitis, in which surgical treatment was instituted in eight and eighteen hours respectively. Of those that recovered, eight, twenty, eight, twelve and twelve hours elapsed from the first symptom until operation. Gangrene or serious damage to the bowel was not encountered in any of the operated cases.

#### CONCENTRATED FEEDING FOR INFANTS AND CHILDREN.—Tobias L. Birnberg, M. D., Archives of Pediatrics. Dec., 1924.

In the past we have tried to overcome the possible injurious effects of artificial feeding by dilution. This has been carried too far. In order to get sufficient food such large quantities had to be taken that many children had to go without gaining for the first few months. Or so much fluid was taken that the child's urinary organs were in a state of continual hyperactivity. So pediatricians, especially in Europe, now seem to be swinging to the other extreme. The fear of causing fermentation and loose stools from giving high carbohydrate feedings has passed and now 17% or more sugar is being used. Moderate amounts of fats are also employed—more than formerly. Views have changed markedly as to the proteins—moderation in their use is now the rule.

The most common of the concentrated foods are: (1) whole milk plus 17 per cent sugar, (2) concentrated protein milk plus 10 to 20 per cent sugar, (3) various butter, flour, sugar mixtures, (4) pastes or thick cereals. The indications for concentrated feeding are: (1) vomiting, (2) Anorexia, and other difficulties in feed intake, (3) dystrophy with little loss of tolerance, (4) complementary feeding in nursing infants, (5) exudative diathesis, (6) enuresis and allied conditions, (7) in exudations without kidney involvement, (8) asthenic and undernourished children. It may be of benefit in nervous vomiting, infectious vomiting and in pylorospasm. In small premature babies, with severe vomiting, whose stomach capacity is very limited, breast milk plus 17 per cent sugar, or cows milk with 17 per cent sugar is often surprisingly successful. The theories explaining the benefits derived from concentrated feeding in dystrophy are (1) the concentrated sugar acts as a preservative: (2) the concentrated sugar has a destructive effect on the bacteria, consequently hindering fermentation: (3) due to the concentration there is not a dilution of the alkaline intestinal juices which are the protecting agents against fermentation by neutralizing the fatty acids. In complementary feeding the small bulk does not fill up the stomach and prevent the child from nursing hard on the breast at the next feeding.

The contra-indications of concentrated feeding are few, the main ones being (1) hot weather, (2) dystrophy where the tolerance is unknown

and possibly low, (3) among ignorant people where the patient cannot be kept under observation.

The author concludes that concentrated feeding has not been used enough in this country and the supposed dangers from it are largely theoretical.

#### NOTES IN THE EXPERIMENTAL PRODUCTION OF DRIED BREAST MILK.—Lawrence

Wild Smith, M. D. and Paul W. Emerson, M. D. The Boston Medical and Surgical Journal.

The Roller method of producing dried milk was used—identical with the method used by the Dry Milk Company of New York in producing Dryco. It consisted of a revolving drum heated by steam. The milk was fed onto the surface at one side and the dried product scraped off by a knife blade from the opposite side. The product obtained was yellowish white in color and slightly greasy in texture. Chemical analysis repeatedly gave a fairly uniform composition, even when specimens were obtained from different women. The average composition was approximately:

Fat .....	30%
Carbohydrates .....	60%
Protein .....	10%

It was thought that the heat was probably too great, so that a certain amount of its caloric value was lost by carbonization, chiefly of the lactose. The protein was probably rendered less soluble and a certain amount even made inert. Experience has shown that keeping the powder for a period as long as two years does not alter its food value nor destroy entirely its antiscorbutic value. But after a few months there develops a slightly musty or tallowy odor on account of the fat becoming rancid. Of course, this would render it objectional. It is thought that this can be modified by refining the process of production, such as drying it in vacuo and reducing its initial fat content. Also by improving the storage methods. Experimental feeding of infants with this product is now being carried out. It is hoped that centers can be established where the mothers after proper physical examination can have their breasts emptied, preferably by Sedgwick's method of manual expression. A plea is made for the furtherance of the use of dried breast milk as the most logical substitute for fresh milk in cases requiring breast milk and where the fresh milk is not available.

#### BOOK REVIEWS

MANUAL OF PSYCHIATRY, for the Medical Student and General Practitioner. By Paul E. Bowers, M.D., Examiner in Lunacy, State of California; Lecturer in Neuropsychiatry, Post Graduate Medical School of the University of California, Los Angeles. Octavo volume of 365 pages. Philadelphia and London: W. B. Saunders Company, 1924, Cloth, \$3.50 net.

Dr. Bowers takes the position that all men engaged in the science of medicine, sooner or

later are confronted with problems related to mental disorders, and therefore should have a working knowledge of psychiatry, its symptoms, diagnosis and treatment. The purpose of this volume is to afford the student a comprehensive and systematic outline of the field of psychiatry. The book covers the important phases in a splendid manner.

#### INTERNATIONAL CLINICS. VOLUME 1-1925.

Edited by Henry W. Cattell, A.M., M.D., Philadelphia, with the collaboration of many American and English authors. Illustrated, Cloth, 301 pages, J. B. Lippincott Company, Philadelphia.

The first interesting article noted in this issue is report of the clinic of Dr. Lewellys F. Barker, Baltimore, in which *Staphylococcus Septicaemia* with *Meningitis Thrombophlebitis*, *Embolie Pneumonia* and *Nephritis* with recovery, is reported. The case was treated symptomatically throughout and despite every search the focus of infection causing the trouble could not be demonstrated, though all findings pointed to prostatic infection as the probable cause. A thorough discussion of the means at hand which have been and may be used to combat such systemic infections with localized foci was discussed. Of the measures, chemotherapeutics in the form of gentian violet or mercurochrome, after the methods of Young and Hill seemed to offer a better outlook, but general supportive and reconstructives remain the sheet-anchor to rely upon. The treatment psychoneurosis was also considered. A capable leader with broad surgical and medical training, if an internist, he should have intimate contact with a surgeon and vice versa; well equipped x-ray and laboratory aids, and a working agreement with specialists in the various lines, but no partnership agreements, is stressed as necessary to a proper handling of these cases. A new and effective method of treatment of chronic suppurations, especially of bones by Max Thorek, Chicago, deserves more than notice for these cases are chronically prolonged and baffling to all known methods of treatment. Discarding all antiseptic or germicidal agents, including the analine dyes, as they either fail to reach the desideratum, have low toxicity, too high germicidal index, etc., he has used a combination of aluminum-potassium nitrate as it increased the growth of bacteria instead of possessing the usual antiseptic and germicidal powers and that it was non-toxic. The theory of treatment rests on the production of anti-bodies instead of direct specifics. It may be worth trial. The volume contains many other interesting contributions.



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### SPASMODIC STENOSIS OF THE ESOPHAGUS.\*

RURIC N. SMITH, M.D.  
TULSA

When a patient presents himself with a history of being unable to swallow food or inability to keep it down, we at once think of there being some trouble with the esophagus or stomach or both. Upon final analysis it will be found that the pathology is nearly always in some part of the esophagus.

In reviewing such a case our first consideration will be that of the general make-up of the patient as to age, nourishment, temperament, etc.; then the duration of the trouble and whether there are other symptoms besides the ones mentioned. Can any food, solid or liquid, be swallowed; does it go down and come up immediately; how long after swallowing is it expelled; can only a small amount be swallowed and can it be voluntarily expelled, are points to be considered.

Very frequently the general practitioner will see a patient who gives a history of having a lump in the throat and of being unable at times to swallow. There is a general nervous temperament and after a while the condition clears without any treatment to the throat being administered.

There may be a history of the patient having had diphtheria a short time before, followed by paralysis of muscles of the pharynx, eyes, face and esophagus. In a condition like this, the patient will be unable to swallow any material whatever. Paralysis of these structures may be caused by central lesions of the brain as well as by toxic conditions.

When considering these disease conditions, we must realize the great importance of the fluoroscope and x-ray. In many diseases the signs and symptoms stand out sufficiently to make correct diagnoses, but when studying diseases of the esophagus the x-ray and fluoroscope and the esophagoscope must go hand in hand.

The esophagus has very little or no pain sense below the cricopharyngeus muscle so

the symptoms produced from disease conditions will generally be those that result from stenosis. The stricture may result from the formation of scar tissue and may be slight in extent or the esophageal lumen will be entirely occluded. Sometimes there will be two or three strictures in the same case. In such cases there is usually a history of the patient having swallowed some corrosive. Lye, washing powder, bichloride of mercury, ammonia, and strong acids are the more common substances that cause such trouble.

No doubt we are all familiar with the efforts being made by the A.M.A. Committee, headed by Dr. Jackson, to have these substances labeled so that accidents will be reduced.

Ulcerations, whether from lues, esophagitis, tuberculosis, peptic ulcer, following the lodgment of foreign bodies, typhoid and scarlet fevers, are often followed by strictures. The stenosis may be slight or so tight that no instrument can be passed.

A cicatricial stenosis, to produce symptoms, is generally of considerable extent though it may have been years in reaching this stage. Where a six or seven millimeter opening can be maintained, carefully masticated food will pass through without difficulty. I recall a case where a large bolus of meat was lodged above such a stricture. This was in a young woman. I removed the meat in small fragments. There was moderate dilation of the esophagus. Presumably the esophagus is now functioning well as I have not heard from the patient these two years since the accident.

A tumor in the vicinity of the esophagus will cause compression stenosis. Goitre, Aneurysm, a dilated Aorta, Malignancies, etc., are masses to be considered.

Diverticula of the esophagus will cause symptoms. Pulsion diverticula is the type usually seen as traction diverticula are of such a nature that they usually do not cause symptoms. Only a few days ago I saw a man sixty years of age who has had trouble for twenty years. He states that it is necessary for a certain amount of food to get in his throat before food will go down into his stomach. After each meal he expels a teacupful of swallowed material. A mass at the lower part of the neck can be seen and

\* Read before Section on Eye, Ear, Nose and Throat, Annual Meeting Oklahoma State Medical Association, Oklahoma City, May 13, 14, 15, 1924.

palpation here produces gurgling sounds and expulsion of the contents of the sac. The patient complains of the annoyance more than of any real discomfort.

Spasmodic stenosis occurs at the upper part and at the lower part of the esophagus. When the stenosis is at the upper part there is spasmodic stenosis of the cricopharyngeus muscle. The patient is unable to swallow liquids or solids. Stenosis in this area is more infrequent than is the type which occurs at the lower part of the esophagus. Passage of a large esophagoscope generally relieves the condition.

Cardiaspasm is the name given to spasmodic stenosis of the lower part of the esophagus. The name seems to indicate a spasmodic closure of the cardiac orifice but different authorities are agreed that there is no increase in circular fibers at the cardia as compared with circular fibers elsewhere in the esophagus. These same authorities have demonstrated by anatomical studies that there are muscle fibers which extend over on the esophagus from the crura of the diaphragm and interlace with fibers of the esophagus. This occurs where the esophagus passes through the hiatus of the diaphragm.

The two to four centimeters of abdominal esophagus between the hiatus and cardia is significant as the front part is covered by lesser omentum. This part of the esophagus is designated by Mosher as the liver tunnel area, because it is largely covered by the left lobe of the liver. Mosher states that his cases are called cardiaspasm because the stricture occurred at the lower part of the esophagus. Jackson states that spasm limited to the cardiac orifice is rare and that the so-called cases of cardiaspasm are nearly always spasm of the hiatal esophagus. He prefers to use the terms hiatal, abdominal and cardial esophagismus.

The two chief factors of cardiaspasm are spasmodic stenosis of the lower end of the esophagus and dilation above the spasm. The stenosis is not complete as a small amount of material can be seen to trickle through. After the esophagus has become dilated it remains so.

In considering the etiology of cardiaspasm, at times a primary neurosis or basic factor is found. No doubt the main cause of cardiaspasm is some irritation present in the esophagus or in the surrounding structures. The functioning of the esophagus being of a reflex nature very likely makes it more susceptible to irritation.

Ulcers of the esophagus, superficial, luetic, tuberculous, cancerous, peptic, etc., are

to be considered. Disease conditions of the stomach, as ulcers and malignancy, gall bladder trouble, infection of lesser omentum, appendicitis, at times, will cause temporary or constant cardiaspasm.

It has been thought that the dilated esophagus above the spasm is due to a loss of tone of the muscle wall. Jackson says the condition is no doubt due to loss of pressure above the spasm. When a patient says that he cannot swallow food or that it seems to stop before entering the stomach, cardiaspasm should be thought of. Cough and regurgitation of food material are usually present in the marked cases. It is natural that there be a loss of weight and general strength when the condition has lasted for some time. These are the most usual symptoms though they are not always prominent.

The case in making a diagnosis will vary with different cases. In the well marked typical cases, no doubt very little difficulty will be encountered. The earlier cases will not present such outstanding symptoms and physical findings. Careful examination with the esophagoscope, fluoroscope and x-ray will make the correct diagnosis in most of the cases.

After a diagnosis has been made treatment for relief of the symptoms and for cure of the causative factor should be instituted. For relief of the symptoms, dilation of the stricture should be instituted. This can be done with the aid of local or general anesthesia. For dilating the strictures, air bags, water bags and metal tubes and dilators are used. I believe air bags and water bags were first made use of. No doubt the ideal procedure is to insert the metal dilator under direct observation and to make the dilation as the condition indicates. To do this, general anesthesia is necessary. Some cases are relieved by passage of the esophagoscope.

There are different models of air bags and water bags on the market. The principle in all is about the same. The bag is swallowed by the patient and when the operator thinks the bag is at the proper location, the dilating force is applied. Sufficient force is used to dilate the stricture to its full physiologic size, from two to three and one-half centimeters. The dilator should remain in position for ten minutes before withdrawal. As an aid in passing the bag the patient may swallow a silk thread a day or two before or in sufficient time for it to pass into the intestines. The olive at the end of the bag is passed over the thread which is supposed to guide the bag through the esophageal orifice into the stomach.



I prefer to make the first examination under ether. A Jackson esophagoscope is passed and the wall of the esophagus carefully examined. The Mosher dilator is then passed through the esophagoscope and located in the stricture; after dilation of ten minutes the instruments are withdrawn. After this examination, subsequent dilations are made with the Plummer water bag. These dilations are made at weekly intervals as long as the condition of the patient indicates. Usually three to six treatments are sufficient.

The care taken by the patient when eating is an important factor. After treatment the patient should take small quantities of liquid and at frequent intervals. Esophageal lavage is often indicated. Forced feeding through the stomach tube, passed twice a day by the patient, is at times a valuable procedure. The esophagus is dilated and a large quantity of nourishing food can be passed into the stomach.

When some pathologic lesion has been found which causes the stenosis it should be treated. Ulcers of the esophagus may have applications of argyrol. Bismuth subnitrate taken dry on the tongue is recommended. If the lesion is luetic or of a tuberculous nature, constitutional treatment should be instituted. Extreme nervousness may be treated with sedatives. Treatment of cardiaspasm should give almost immediate relief. Where the esophagus is dilated there is apt to be more or less trouble at times on account of the slowness with which food passes. I believe there is more or less secretion constantly present in a dilated esophagus. When the symptoms become sufficiently marked the strictures should be dilated.

#### CASE HISTORY:

July 8, 1923. J. B. Age 26 years.

*COMPLAINT: Inability to swallow food.*

#### *FAMILY HISTORY:*

Father and Mother living and in good health. Have never had any trouble swallowing food. Has six brothers, three half brothers and several sisters; all are living and well. None of these have had trouble similar to that complained of by the patient. There is no history of any relatives having had this trouble.

#### *PERSONAL HISTORY:*

Patient had measles and mumps when a child. Has been healthy ever since. Says he never swallowed any corrosive which might cause trouble. Never had any trouble before entering the army. Patient enlisted in the army in 1917 with the engineers. In February, 1918, he went to France and saw ac-

tive service. On October 14, 1918, patient went to the front and was there for three days. During these three days he was gassed for one or two hours. Was sent to camp.

About October 20 patient says he took a nervous, sick spell. His position was bombarded by German air planes. Patient says he was very nervous. Reported to first aid and was sent to hospital as having influenza. Was in hospital two weeks and then reported to camp.

In the Spring of 1919, or about six months after being at the front, patient says he started to belch a great deal and food seemed to stop.

In August, 1919, patient was discharged from the army. Says he had no pep and forced himself to work. Was married in February, 1920.

In May, 1920, patient started to vomit. Would throw up every meal. Condition was worse when lying down. Patient had some operation on nose in July, 1920. This gave no relief. Started to cough about this time.

In May, 1921, patient went to a physician who diagnosed the trouble as high up in the esophagus and gave treatment for fifteen days.

Patient then went to another doctor who diagnosed the trouble as stricture low down. This doctor gave him electric treatments for six weeks. These treatments gave no relief.

In December, 1922, patient came to Tulsa. An x-ray was made and treatments with bougie over a string were given. A water bag was passed in January. There was a slight relief for a month or two.

The next year patient did practically nothing. During the last six months patient has been working for a refinery. All this time patient has been having trouble. Loses two or three days on every pay. Has had spells when he could not swallow for three to five days at a time.

#### *PRESENT ILLNESS;*

Patient presented himself with the statement that he has been unable to take any food for three days. Has had to quit work. As soon as he swallows any solid or liquid food it immediately comes up. Patient has a cough. When lying down the cough is worse and mucous and food material are expelled. Patient says he is weak and has lost weight.

#### *PHYSICAL EXAMINATION:*

Patient a well developed and fairly well nourished white male. Looks pale and weak. Head: Eyes and ears normal. Teeth in fair condition. Tonsils moderately enlarged.

Chest: Breath sounds good. No rales heard. Heart sounds of fair quality. No murmurs heard. Abdomen: Scaphoid in type. No abnormal masses or areas of tenderness noted. Respiratory movements good. Reflexes somewhat exaggerated. X-ray examination showed almost total stenosis of esophagus at the diaphragm. Above stenosis there is moderate dilation of esophagus.

#### TREATMENT:

July 8: Patient was sent to hospital and given ether. Esophagoscope was passed. Moderate dilation of esophagus was noted. The wall was pale. Considerable mucous present. No abnormal masses or ulcerations were seen. No stricture was noted above the diaphragm. The esophagoscope was passed through the esophageal hiatus without difficulty. A Mosher esophageal dilator was inserted and the hiatus dilated. This was allowed to remain in position for ten minutes.

July 9: Patient says he is feeling fairly well. Has taken a glass of water and milk. Looks fairly well.

July 18, 1923: Plummer's water bag passed and esophagus dilated. Large amount of liquid expelled.

July 19: Patient went to work. Eating.

July 20: Says he feels better than he has in several months.

July 25, 1923: Water bag used. Considerable fluid expelled. String came out. Not sure about position of bag.

September 17: Water bag used. Apparently in good position. Large amount of fluid expelled.

September 25, 1923: Patient says his condition is good. Swallowing is much improved after last treatment.

November 22: Water bag used. Considerable fluid expelled. Apparently in good position.

November 27: Patient says he is feeling good. Eats everything. Expels small amount of fluid at times.

May 6, 1924: Patient has been seen from time to time since the last treatment in November. Says he is getting on all right. Eats everything without any precaution. Has gained twenty-five pounds in weight. Says he has to get up at night two or three times a week on account of fluid coming up in his throat. Water bag passed and x-ray made.

#### RESPONSIBILITY FOR THE PRE-SCHOOL CHILD\*

J. P. TORREY, M.D.

BARTLESVILLE

The child from birth to six years of age comes under the physician's care, and because this period of life is one especially favorable for prophylactic efforts, preventive medicine has here opportunity to pilot him safely through the years in which he is developing immunity or resistance to the common infections.

The general practitioner who acts as obstetrician and pediatrician should feel keenly his responsibility for the welfare of these young children of pre-school age.

When a child begins school it comes under observation of school physicians and school nurses and its teachers, but before that time nothing systematic and regular is commonly done for it. The parents' love makes them blind to the defects of their own children.

Physicians to-day are perhaps too conservative about interfering in health matters unless invited, because the medical world is divided into so many special lines and there are so many cults and isms the people employ, that the family physician does not feel sure of his former place as a general caretaker and adviser, such as he used to be.

This loss of a sense of responsibility leaves it to everybody's business which is generally nobody's business to look after these little children. It has been arranged in certain hospitals to have all obstetric cases cared for after confinement jointly by the maternity and pediatric departments in order to start the child from the beginning under the care of the pediatrician whose responsibility may continue throughout childhood.

A regular monthly and later quarterly office inspection of these young children could be done by all of us who treat children either specially or as general practitioners, if we could teach our patients to bring them.

The child could be quickly weighed, measured, inspected for such conditions as tongue tie, adenoids, tonsils, strabismus, otitis, prominent ears, skin lesions, rachitis and its deformities, flat and club foot, phimosis, hip, knee and spine diseases, hernias, adenitis, thyroid enlargement, cretinism, dental defects, backward mentality, general anemia, malaria, hookworm, parasites. It's a long list but

\* Read before Section on Obstetrics and Pediatrics, Annual Meeting Oklahoma State Medical Association, Oklahoma City, May 13, 14, 15, 1924.



could be quickly read over and checked up.

These office inspections could well be given to the poor and the middle class, only charging them for the treatment of defects we find and so fight the quacks with their own fire, not to mention making it possible for these classes to give their children this supervision. Otherwise we could not expect our industrial classes in good times and bad to take on such an extra financial burden to their already sorely crowded budget.

I realize that there are many careless mothers who would not take trouble to regularly bring their babies even for a free examination, such might be seen occasionally in the home when there to see other members of the family or for life insurance examinations. Nurses who visit these homes should be taught to look for all defects and report to the family physician what they suspect needs attention. Neighbors and friends should be urged on all possible occasions to suggest no remedies nor doctors but only to advise the parents to take defective children to their own doctor. We should also urge upon parents promptness in reporting anything wrong about their children. They so often wait to try home remedies or the neighbors' suggestions until too late to prevent serious conditions.

Doctors, I would urge you never to make light of such information from parents, nurses, neighbors or other examining physicians until you have carefully weighed the evidence and then observed the child for a time. This differing among physicians hurts our standing with the laity. If we have to differ after careful investigation, let us do it with due consideration to our brother's opinion.

There are a number of conditions which seem to me our own responsibility that we sometimes delegate to others or leave entirely neglected. Let me mention a few of them.

The doctor generally leaves the care of the navel to those who dress the newborn, hemorrhage due to careless ligature of a large cord or from hermophilia with an oozing stump, are sufficiently frequent accidents to call for our personal care of the navel at birth. Infection at the navel is a possibility and should be safe-guarded by the best of aseptic care at our hands until it has healed.

Before leaving mother and child at birth, a general looking over for the tongue-tie, birth paralysis and phimosis may well be given and directions written down about treatments, present or future, of the conditions found.

I like to see the baby take the breast also before leaving. It's a long stride towards breast feeding to have seen the mother actually suckle the infant before you leave the house. Many early defects can be easily corrected in the first months of life by the family doctor. Take club foot, for instance, and umbilical hernia. Adhesive plaster strapping which you can teach the mother to apply will cure each one in the first year. Projecting ears can be trained back by the net bonnet, a tight prepuce can be gradually dilated and put back or circumcised as you prefer, adenoids obstructing a nursing baby can be easily removed the first few weeks or months after birth. These things parents are ignorant about unless we warn them.

It is a shame to our profession that civic clubs have to gather in the crippled children of the community and make arrangements with us to have these cases attended to. It's our own business and we should look after it.

Again our duty regarding breast feeding is a serious one. It is surprising how many physicians permit or even advise artificial feeding at the very first suggestion of feeding difficulties. They don't seem to realize that mother's milk can be modified by diet, by water intake and by exercise. The management of lactation is a real science which we should study if we do not understand it. We ought to fight for breast feeding if we do our whole duty to the infant. We may oppose the mother and all her friends, nurses and other doctors as well. Let us remember nursing is a natural function and the argument that our modern civilization has destroyed it, is no more sensible than to advocate taking food in tablet form for the same reason. The nearer we can get to nature in maintaining our vital functions the better results we will achieve.

Most women can nurse their babies if they think they can and really want to. This doctrine is not popular and it is always a temptation to tell people that which they wish to hear for it brings the dollars. Telling unpalatable truths can be done only by a very tactful man without loss of clientel.

There are other matters we should teach to parents also, not always agreeable, relating to the child's psychology. The training of children from birth in habits of obedience and subordination is essential from purely medical as well as moral standpoints. As early training along these lines makes for success in handling sick children and winning their co-operation when required to take medicine, to diet, to exercise, or take treatments which are

often unpleasant but essential to recovery. The psychology of childhood needs more attention than we are prone to give it. The parent so often remarks "Baby is spoiled" which means it has been well started upon a career of willfulness. Baby soon learns that if it cries long and hard enough it surely gets what it wants.

Then parents are selfish, unwilling to give up pleasures, harmless for themselves, but harmful to the child, hence baby is taken to shows and fairs, into dusty noisy crowds, exposed to infection and a racking of its sensitive nervous system. Parents and neighbors often begin early to plant seeds of degeneracy in the fertile soil of childhood, encouraging fear and jealousy.

You say "It's not the doctor's business to teach parents these things?" Indeed it is. Many people have no one else to teach or reprove them in such matters which concern child life and welfare physically, mentally, and morally. We should also urge people to help themselves and their children along moral lines by church attendance. The clergy back up our work, why should we not cooperate with them in their efforts to better humanity? It will take a little time to discuss these things in the home or office, but it would be of greater profit than to talk over the weather or the latest scandal.

Preventive medicine can do much at this time of life for our patients. Vaccination is now pretty generally delayed until school age but it should be done at three months. Here we will meet opposition by the parent, backed up by all the cults and isms, the neighbors and by some doctors. If we take pains with our technique and should never again have a single case of septicaemia from carelessness, it would still take fifty years for the public to cease telling about sore arms and death from vaccination. Let's be careful and guard the reputation of all of these prophylactic measures by a faultless technique. The Schick test and toxin, antitoxin, and the scarlet fever Dick toxin are destined to rid us of these two plagues of childhood. Let's keep talking them to our patients. Pertussis serum used for babies before infection occurs from older children in the family, deserves our confidence. Cold serum, anti-typhoid serum, quinine as a prevention for malarial and insect destruction to guard these helpless infants must be constantly in our minds. We must spread the knowledge of these things and counteract propaganda put out against them. We know that attention to these preventive measures and a better, stricter quarantine against contagious diseases, with co-operation between

all concerned would mean life saving and better health and victory over all infectious diseases.

This incomplete and hasty sketch of some of our responsibilities for the welfare of young children may lead you to ask, Mr. Doctor, Do you watch over all the children of families who generally employ you in all these details? A very proper question to which I answer No. That is my reason for writing this paper, that I might call to mind the possibilities and responsibilities which I myself forget and neglect. Many of these things would, under present conditions, be impossible to accomplish. It is the object of this discussion to suggest how we may attain more closely to an ideal supervision of the young child.

Of course, a chance to examine these children at reasonably frequent intervals would accomplish the diagnosis in the majority of conditions. Permission to use the treatment indicated, however, would not be always granted, especially prophylactic treatments. What *obstacles* stand in the way of these desirable ends?

*First*, opposition due to ignorance, fear, or prejudice of the friends and advisors, sometimes the opposition of doctors who have different opinions.

*Second*, financial reasons which are of two sorts, the poor and middle class who are unable or think themselves unable to add to their financial burdens. The middle class and well-to-do class who through selfishness and prejudice are unwilling to spend money for such things or think the doctor is only commercial in his aims and purposes like themselves.

How may we overcome these obstacles?

Not rapidly, but gradually as all progress has always come, by better team work among ourselves and by taking more time to teach the public, by doing better and more careful work, lest we bring bad repute upon vaccinations and other prophylactic means.

How can we get the careless, stupid and stingy to bring their babies to us?

By being all things to all men, meeting each half way as he shows signs of co-operation. By more justice in our fee table and by being willing to make free examinations where we really believe this financial stumbling block is prohibitive and sincere.

What do I mean by justice in our charges? It is a practically flat rate fee table in most of the charges of the general practitioner. This means that the man having an income of \$500.00 in paying a bill of \$5.00 expends 1% of his entire earnings. A \$1,000.00 man



in paying the same amount gives you  $\frac{1}{2}\%$ , the \$5,000.00 man 1-10 of 1% and the \$10,000.00 man 1-20 of 1% of his income for the same services. That is manifestly unjust, especially to the middle class who try to pay their bills. Nobody expects the poor to pay all of their bills. It would be impossible for them to do so and live.

I really believe in spite of many difficulties undoubtedly present and evident that the American people are smart enough to find a way, if we really cared enough about it to re-adjust our fees even as we hope and fix our taxes, with justice to all, with a fairly just proportion according to net income. A percentage charge according to net income like the tax rate would not be impossible if we went about it determined to accomplish. It takes time to introduce new methods but time does not count when justice is the goal. Single calls or office work and transient business would need but little modification from the present rates, but surgical, obstetrical and large family accounts should be pro-rated.

The same should be done for us in our annual dues to the multitude of organizations to which we belong, in public charity calls, and church benevolences asked of us, in taxes and all financial burdens now borne flat rate by rich and middle class alike.

In obstetric charges a man with \$500.00 would pay but \$5.00 for his wife's confinement but the \$1,000.00 man would pay \$10.00; the \$2,000.00 man, \$20.00; the \$3,000.00 man, \$30.00 or the \$5,000.00 man, \$50.00 and the \$10,000.00 man, \$100.00. It is not much different than a flat rate of \$25.00 or \$35.00, now common in our state, but a lot of difference to the man earning less than \$3,000.00. I claim it is better for us to charge less money to these industrial workers if in turn we were given the same fair rating ourselves and to know we were getting and giving a square deal than to crowd the most worthy of our patrons, and be defrauded by the unscrupulous ones as obtains at present, and also pay flat rates ourselves with the men who handle thousands and millions to our hundreds of dollars in a large proportion of our expenses.

Medical charity could be confined then, more closely to the people who from misfortune, illness, or loss of work or plain laziness, always have to be helped. This will sound visionary, utopian and impracticable, but nevertheless could be done like flying or radio when we really go after it.

I trust this disconnected talk may bring out a profitable discussion of practical means whereby we may keep in closer touch with child life, safeguard it from threatening dan-

gers, remedy congenital and acquired defects, and so encourage, instruct and inspire parents that they become devoted to their children's betterment both physically and morally.

## THE PRIMIPARA—CARE AND DELIVERY\*

CATHERINE BRYDIA, M.D.

ADA

Is there anything wrong with the present status of obstetrical practice? If so, what is the matter and how can it be corrected?

In 1917, Grace Meigs, in her report on maternal mortality, stated that at least fifteen or sixteen thousand women die every year in the United States from conditions almost entirely preventable, caused by childbirth. What can we do to better this truly appalling situation?

Is it true that the United States rates third in mortality and morbidity of obstetric practice? Only Spain and Belgium having a higher death rate, and that the midwives have a smaller per cent of mortality than the Doctor?

Up to the year 1850 it was considered a disgrace for a man to go into obstetrics and he was not permitted to join the Royal College of Surgeons of London, and if he was seen talking to an obstetrician on the streets, his resignation was requested.

In no other branch of medicine is there so much difference of viewpoint as in obstetrics, or so much diversified technic as there is in the management of labor, this is perhaps due to the fact that in no other branch is there so little clinical teaching as in the department of obstetrics, except for demonstration of the pathological, Cæsarian Section or difficult forceps. We need better preparation for the ordinary, normal cases. Every general Practitioner should specialize in obstetrics for he will continue to deliver women and the time has come when he must do it properly and carefully.

We must admit that obstetrics is one of the most neglected fields of medicine and that the result is often neglect of the normal and butchery of the abnormal.

In the cities the rich obtain excellent care, and the poor often obtain the same excellent attention when placed in Hospitals, and they also have good attention from the dispensaries in the line of prenatal care. The

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population most in need of obstetrical care is the so-called middle class, with limited means. This is the class that depends on the middle class medical man, or the general practitioner, "who is the greatest danger in obstetrics", ninety per cent of obstetrics continues to be done in the home under this man's care. The midwife under medical control does but little harm, therefore, is not a serious problem, which is perhaps due to her non-interference and calling a doctor when in trouble.

But the Doctor who must do obstetrics with his general practice, he dares not refuse, giving as little time and attention as possible is the one responsible for so many obstetric disasters.

Obstetrics should be considered of equal importance with surgery. On entering practice we are called upon to attend labor before we are to do operative surgery.

There is at the present time a recognized value of the prenatal care and early examination of pregnant women. This change has come within the last few years and has almost eliminated eclampsia; if symptoms of toxemia begin to develop we begin the treatment as though eclampsia were eminent.

There are dangers during pregnancy, but few women die during the process of reproduction. The majority of deaths occur in young, healthy women most often the primipara, due to surgical uncleanness and poor obstetric judgment as to the manner of delivery. It is surprising to know with what carelessness the average practitioner does vaginal examinations. He treats pneumonia, influenza, scarlet fever, carbunkles, and suppurating wounds, and then does not hesitate to attend a case of labor with an ungloved hand. This is the reason we have so much sepsis, and, in my opinion, is nothing short of crime. When we realize that sepsis is carried in by the accoucher, with the exception of gonorrheal and tubercular infections, and the time is when the laity realizes that it is our carelessness, it is enough to keep us humble and cause us to adhere to surgical principles.

And not less dangerous is the injudicious use of pituitrin, a most valuable remedy when cautiously administered and a very dangerous one when indiscriminately used. There is only one time to use pituitrin and that is in uterine inertia after complete dilation and the gate-way open, it is not only dangerous to the mother but also to the child, from compression from the continuous contractions. It is my opinion that we have many children paralyzed from head injuries during child-

birth from the use of pituitrin and that it is seldomly indicated in the delivery of the primipara.

I plead for rational obstetrics. Do not deviate the physiological to a pathological case; be conservative in the conduct of delivery; the new things are good in the hands of the specialist, cesarian section, podalic version, forceps delivery and other radical measures, often prove to be for the best interest of mother and child, the danger lies not with the specialist but with the fearless conscienceless imitator or enthusiastic beginner.

Doctor Potter with his Podalic version and Doctor DeLee with his surgical Specialty are truly artists, but to follow them we disregard the natural physiological process of labor. I can see no reason why the great bulk of women should not have their babies in the old fashioned way, as did their ancestors before them.

I plead for non-interference. The sin of omission is not as great as the sin of commission. The primipara should be taught that labor is a natural normal physiological process, and her mental condition relieved as much as possible of the pain and danger of childbirth.

It is sometimes harder to control and satisfy our first assistant "her mother" than it is the patient and she is often responsible for us not taking enough time to terminate a normal delivery.

During the first stage of labor we are safe in using a moderate amount of opiates, morphine, morphine-hyacinine or morphine-scopolamin, if we are sure of enough to eliminate the danger of narcosis to the baby, in this way we are able to preserve the vitality and relieve the nervousness produced by those first unbearable pains, and wait for hours, or days for complete dilation without manipulation, without danger to mother or child.

In the second stage of labor the pains are greater but better borne because she realizes that she is progressing. We cannot eliminate the second stage of labor, but we can eliminate or modify the pain, analgesia and anaesthesia by nitrous oxide, oxygen, and various combined methods are successful and desirable in the hands of specialists with our patient in the hospital.

I agree with Doctor Gillespie on anaesthesia in the second stage of labor. "Gillespie is an advocate of the use of chloroform in normal labor by the family doctor who must meet the emergency of obstetric practice with the contents of his satchel. He believes that chloroform must be given only at the beginning of the pain and to be truly successful



must be applied to the mask before the patient is aware that the uterus is contracting, so that three or four full inhalations may be taken before the height of the pain approaches. Otherwise the patient will be busy sucking in the vapor when she should be holding her breath and bearing down for efficient progress. The amount of chloroform must vary with the force of the pain and the amount of voluntary effort of the mother; hence it must be regulated by the obstetrician himself and not by an anesthetist who judges the requirements by the action of the patient. If the patient does not co-operate properly, take the anesthetic away until she does. Obstetric anesthesia is not like surgical anesthesia.

Take time and support the perineum with hot applications, for when we deliver the primipara without injury we consider it an obstetric triumph.

In the third stage make your patient comfortable, cover her up and keep her warm to prevent shock. Give plenty of time for the detachment of the placenta, deliver by Crede method and do not leave her until all danger of post-partum hemorrhage is past.

## ROUTINE TECHNIQUE IN THE MANAGEMENT OF LABOR IN THE HOME\*

J. G. BINKLEY, M.D.  
OKLAHOMA CITY

If labor is properly conducted in the home, in this age of sepsis and hospitals, it is necessary that it be under the management of a well trained competent physician who possesses a large and fully equipped obstetrical case or else two medium sized cases systematically equipped for this purpose and no other. The time has come when people recognize the necessity of being well cared for during labor and the lying-in period, and they are as willing to pay for it as for any major operation.

So the obstetrical case should contain the following to be at hand when needed as well as what is required in the set ups to be mentioned in the technique of normal labor:—Stethoscope, rectal gloves, two pair of good gloves in boiling bag, a tin box of soap, bottle of tincture of green soap, rubber sheet; razor, pair of leggings, tracheal tube, urethral catheter, pelvimeter, obstetrical forceps, hæmostats, umbilical scissors, steel tape, scales, gown, towels, lysol, talcum, three pans that

will nest, birth book, box of 5 gr. capsules of quinine, cord-tie, alcohol, ergot, boric acid solution, tube of vaseline, capsules of AgNO<sub>3</sub>, or else a bottle of 25% argyrol; hypodermic case containing tube of morphine gr.  $\frac{1}{4}$ , ampules of ergot, camphor in oil, and pituitrin; needles, needle holder, and sterile sutures; a jar of cotton pledgets, and a jar containing vulva pads, cord dressings and mouth wipes. With the above articles properly prepared and arranged one is prepared to do good work and has no fear when called to conduct a labor case.

When a physician is called on a labor case he is expected to come at once and should do so even if it is necessary to sidetrack some other case. Labor is usually an emergency case and should be so considered by the attendant. When he arrives he usually finds all present in a state of excitement. The Doctor should be perfectly calm and by his attitude immediately quiet their fears. If the patient's pains are not too hard and frequent thus indicating a precipitate, on the physician's arrival, he should first make a careful diagnosis.

**DIAGNOSIS:** History of present pains as to when they began, their frequency, duration, and character; also a history of previous labors, if any. If she is a primipara, inquire as to the character of the labors of her mother and sisters . . . A careful physical examination should now be made in order to diagnose the location of the foetus, the presentation, the stage of labor, and the condition of the bladder and rectum . . . The patient should be instructed to put on a gown, remove all other clothing, and lie down between sheets. Of course, if a nurse is present she is only instructed to prepare the patient for examination.

While the patient is being prepared the physician should make the first part of Sink set-up consisting of lubricant, powder, pan with lysol, brush, soap, rectal gloves; then wash and scrub his hands for the abdominal examination. . . With the patient so prepared in the dorsal position and lying with the knees flexed and the chest and shoulders slightly raised, the upper sheet is gently rolled down on a level with the pubes, and her gown rolled up to her breast thus exposing her abdomen to full view . . . Now the physician by inspection may observe foetal movements and can often tell which side the foetus is on by the bulk and movements. After waiting for any contraction pain or wave to subside and the abdomen becomes soft we should palpate the abdomen by gentle touch with the soft parts of the fingers, bimanu-

\* Read before the Oklahoma County Medical Society, Oklahoma City, Oklahoma, June 12, 1920

ally. (As a rule a good external examination gives more information than the internal) First note the fundus of the uterus, then locate the foetal back or long axis which tells whether the occiput points to the right or left, or anterior or posterior. In the left position of occiput the back is on mother's left, and in right positions of occiput the back is on mother's right . . . Next the shoulder which is of considerable importance, should be located. We follow the dorsal plane already found to a depression or the neck, back of which we recognize the shoulder. This may also be found by locating the head first and following the depression back to the shoulder, which is twice as far from the median line in posterior as in anterior positions . . . We now come to the foetal head, the most important of all parts to be palpated. It is a large globular body communicating a sensation of solidity. In a normal position we expect to find it at the brim of the pelvis, and with the fingers bimanually determine whether it is above or below its usual position at the brim of the pelvis. It is equally as important to determine the head's absence from its usual location as its presence, for its absence is positive evidence that we have to deal with a breech or a transverse position.

Having determined the location and position we may now locate and take the foetal heart sounds, which are best heard just above and latterly to the shoulder already located. This may be done by the old and direct method or by the use of the stethoscope, the indirect method, the one of choice. The heart sounds are usually closer to the medial line on the right position than the left. All during the second stage of labor the heart rate and character should be noted frequently.

Rectal examination at this time will help to determine the stage of labor. One who has had a great deal of experience making rectal examination may be able to gain as much by rectal as vaginal. However, most of the men doing obstetrical work in the home or accustomed to making vaginal examinations, which can only be accepted to-day under strict careful cleansing and proper technique as will be mentioned later. First, if abdominal examination shows head within the pelvic cavity and she gives a history of easy labors no vaginal examination is necessary. Still if one should be made it should not be repeated during the first stage. The more perfect the external examination, the less need of any internal examination.

**VAGINAL EXAMINATIONS:** In preparing for a vaginal examination the doctor

should cleanse hands with nail-stick, brush, soap and water for five or more minutes, the same as for any major operation. He should then put on sterile gloves and immerse them in lysol solution. First he should wash vulva with pledgets of cotton soaked in soap and water, then with lysol solution, being careful to make all movements downward. I do not shave the vulva unless forceps or a real hard labor is indicated. The technique of the vaginal examination is important and should be as follows: Separate the cleansed labia with one hand then introduce two fingers of the examining hand into the vagina. Note the size of the vagina, condition of the cervix, its dilatation and elasticity, the bag of waters, and if possible the fontanels with their extending sutures, being careful to differentiate whether anterior or posterior fontanel by the size and number of sutures. The anterior being larger with four sutures extending while the posterior has only three. We then should note the conjugate diameter, also the inclination and thickness of the symphysis . . . If there should be a breech presentation we will feel the soft buttocks, the anus with its strong sphincter, and if it be a boy we may feel the scrotum and testicles.

At this time we should take the blood pressure, and if there are any indications of abnormalities and no previous measurements made, use the pelvimeter in order to ascertain whether or not the baby can be delivered normally.

**LABOR BED:** The diagnosis having been made, a labor bed, if not previously arranged should now be prepared under the attendants directions as follows: Locate the bed so that there will be a good light at the foot and on the working side. Remove any feather bed, and if there be springs place a couple of table leaves on them just under the mattress and near the working edge. The boards prevent an uncomfortable angle in the bed and give better support to the patient. After a clean sheet is spread and a pad is placed for the patient after labor, I cover them with newspapers so as to keep my rubber sheet from coming in contact with the pad and sheet. Now spread the rubber sheet and cover it with any pad prepared for the occasion. Three sides of the rubber sheet are now rolled up over rolls of paper so as to prevent any leakage from it, thus making it very similar to a large Kelly pad. Over this is spread another clean laundered sheet which is the only piece of bedding soiled unless it be the third sheet which is used to cover the patient. . . . When she takes her bed she is instructed to roll up her gown high under her back thus



preventing its being soiled and the necessity of its being changed so soon after labor.

Make Bed Set-up on a chair that is covered with newspapers as follows: Cotton pledgets and vulva pads, pan of lysol solution, tracheal catheter, ergot, cord-tie, all covered with a towel.

Make Baby-Set-up in the same manner consisting of pelvimeter, scales and tape-measure, silver nitrate 1% or argyrol 25%, boric acid solution, alcohol, cord-dressing, cotton pledgets, saucer of olive oil, a pillow covered with newspapers and a diaper . . . At foot of bed place diaper for receiving baby and a T binder for the mother.

Second part of the Sink Set-up—just before delivery, consisting of pan with lysol solution, brushes from sterile container, and soap.

**STIMULATIONS:** After all is ready and the labor is progressing too slowly give a 5 gr. capsule of quinine. If dilation is complete, the patient a multipara, the blood pressure normal, and the labor progressing slowly we may give from 3 to 5 minims of pituitrin which decreases blood pressure and should not be used in eclamptic conditions. I prefer small doses repeated at intervals rather than large doses. Large doses cause long contractions thus lessening the foetal blood supply so that its heart rate is decreased and asphyxia results.

#### CONDUCT OF FIRST STAGE:

During the first stage the patient should not be put to bed nor encouraged to make bearing-down efforts. The rectum should be emptied with soap suds enema. The Doctor should endeavor to allay all excitement and fear and proceed with his work with a true knowledge of conditions and confidence in his ability to take care of any emergency which may arise. Ether is the anesthetic of choice in the first stage where a few drops may be used when the pains are too long and painful.

#### CONDUCT OF SECOND STAGE:

Have patient lie down on back, or else on the side opposite to that towards which fundus is directed. Instruct her to remain perfectly quiet between her pains so as to conserve her strength for the next pain, and also if progressing slowly to hold her breath while the pain is on. However, if she is progressing too rapidly, have her remain in the dorsal position and avoid bearing down efforts in order to prevent a precipitate labor . . . The attendant should wipe away with sterilized absorbent cotton in a downward direction any faces that may be expressed from the rectum, then wash the perineum with ly-

sol solution, and repeat the procedure any time it may appear during this stage.

Attendant should wash hands now with the second sink set-up, put on gown and gloves, wash the vulva with soap (Tr. green) and water, followed by lysol solution, then put on the leggings and spread a sterile towel beneath and below the hips, and a second towel across the abdomen above the pubes.

Now frequent examinations of the foetal heart tones, and also the mother's pulse, should be practiced that any change may be discovered. If the bag of waters is not ruptured, the perineum is bulging, and the cervix cannot be felt, it is time to rupture the bag. This is best done by means of a hæmostat between the pains. We should now be careful that descent and flexion is complete before expulsion. If the head is not flexed sufficiently to give the occipito-bregmatic diameter presenting we should make pressure inward and downward thus giving it more flexion. When the head remains visible between pains the attendant should restrain its advance by pressure applied to the head with the palm of the hand. As the occiput is about to emerge it is grasped in the hand and its too rapid delivery prevented. We should keep in mind that most frequently more harm is produced by too rapid a delivery rather than a slow one. The obstetrician who hasn't time for a slow delivery and resorts to the extreme use of pituitrin had best change his profession if he wishes to render a service to humanity.

During the final act of expulsion advise the patient to breathe fast with her mouth open, and not to bear down, that is if she is not under the influence of ether which should be given at this time to lessen the pain and shorten the duration thus giving more time for the perineum to stretch. After the delivery of the head wipe the baby's face with a towel, pause and feel for the cord around neck, if found, draw it up over the foetal head. If that cannot be done then slip it over the shoulders. If the cord is around the neck twice and neither of the above procedures can be done, then apply two hæmostats to the cord and cut between them.

If the shoulders do not follow the head after a reasonable interval the mother's hips should be elevated or put in cross bed position with hips over the edge of the bed. The attendant with his hands on both sides of baby's head makes traction downward until the anterior shoulder appears at the subpubic arch, then carry the head directly upwards lifting the posterior shoulder over the perineum, and not allowing it to force through the

perineum as is often done by mere carelessness. It is erroneous to think that when the head is delivered that the danger is all over. A very large per cent of our perineal lacerations are due to the delivery of the shoulders and could often be prevented. Usually as soon as the shoulders are delivered we get complete expulsion and the baby is born.

### THIRD STAGE:

Treat baby's eyes with 1% AgNo<sub>3</sub> or 25% argyrol while waiting for the time to tie the cord which should not be done until the pulse is not felt through it. The technique is important. The eyes should be held open by making pressure with the fingers on sterile gauze. The solution should be dropped in one corner of the eye with a clean dropper which has been washed with sterile water then with the solution before using. Then after being treated wash the eyes out with boric acid solution . . . Clamp the cord with a hæmastat one inch from the body, then rub it out smooth and clamp a second hæmastat one inch from the first. Remove the first hæmastat and tie the cord-tape around the imprint made by it. Make one loop around the cord and tie a surgeon's knot, making tension by rolling the thumbs against each other so as to make no jerk on the cord. Cut the cord with umbilical scissors just under the second hæmastat so it will remain attached to the cord, but don't cut the end of the cord-tie until the cord dressing is being made. If no trained nurse is at hand to care for the baby, wrap it in a towel and lay it on its right side until the placenta is delivered.

If there is a tendency for the uterus to relax it should be massaged by a rotary movement made with the soft parts of the fingers applied over the fundus until it becomes hard. However, it is a mistake to irritate an already contracted uterus by massaging and making pressure in an effort at expulsion of the placenta. Instead of holding the fundus we should watch the fundus. As a rule it is 10 to 30 minutes before the placenta is in the vagina which will be indicated by the fundus rising above the umbilicus without becoming relaxed or soft. Then it is that pressure may be made downward and forward thus expressing the placenta out of the vagina . . . If no progress has been made towards delivering the placenta after 30 minutes, then we may resort to Crede's method during contraction. The attendant should not fail to examine the placenta as soon as delivered for missing parts. He should then give one fluid dr. of ergot by mouth or a hypodermic of 1 CC of pituitrin to contract the uterus thus

stopping the hemorrhage and expressing out any clots . . . Repair any perineal lacerations . . . If no trained nurse is at hand the physician should remove the leggins, make first vulvar dressing, remove the rubber sheet with all its contents, and put on a T bandage.

No post-partum douche should be given, and no post-partum vaginal examination unless a severe hemorrhage makes it necessary. Instruct patient to use the slop jar instead of the bed pan thus giving any clots a chance to pass . . . Anoint the baby with olive oil and wipe it off clean, being careful not to get any oil on the cord. Make cord dressing as follows: Sponge the end only with alcohol. If there is no oozing of blood cut off the ends of the cord-tie, powder the cord well and dress with steril gauze of several layers 4 by 6 in. with a hole 1-3 the length for the cord to pass through, then fold the dressing back over the cord and put on the band.

Before leaving give general directions as to the care of both patients, and don't fail to notice the mother's pulse and the amount of hemorrhage.

### MATERNAL MORTALITY IN THE UNITED STATES\*

GEORGE CLARK MOSHER, M.D.  
KANSAS CITY

The American Association of Obstetricians and Gynecologists in 1922 appointed a Committee on Maternal Welfare consisting of Professor Henry Schwarz of Washington University, Dr. George W. Kosmak, Editor of the American Journal of Obstetrics, and myself as Chairman.

One of the functions of this Committee was to attempt by a campaign of education to raise the standard of the practice of obstetrics in the United States.

1. By an appeal to the medical schools for increasing the curriculum in this branch making it again one of the "Big Three" of the student's requirements, equal to internal medicine and surgery.

2. We hope to interest the State Secretaries and through them the Secretaries of County Societies to stress the value of papers on obstetrics on their program.

3. A minimum standard of obstetric technique is proposed urging the general practitioner to adopt this safe and sane method of reducing his morbidity and mortality.

\* Read before Section on Obstetrics and Pediatrics, Annual Meeting Oklahoma State Medical Association, Oklahoma City, May 13, 14, 15, 1924



4. In conjunction with a joint Committee of the American Gynecological Society and the American Child Health Association a campaign to develop the pre-natal clinic centers so that women may be given information as to their health in anticipation to confinement.

All this seems a most ambitious program, and the future will determine if we are to be successful or if we are merely a Committee of Don Quixotes fighting wind mills.

Why should it be necessary for such a joint committee to be appointed?

It is because the crying shame of America is not the Teapot Dome disclosures nor the Grand Jury methods of the United States Senate nor any of a half dozen vagaries affecting our people, but the fact that in maternal mortality our country stands third in the civilized world, being exceeded only by Spain and Belgium, according to the Bureau of Child Welfare at Washington.

What are the sources of the death toll to be checked? Over ninety per cent of the mortality is due to puerperal sepsis and pregnancy toxæmia. This is preventable, sepsis by using simple precautions in making examination in labor, the use of sterile rubber gloves, wearing of a special suit or apron in delivery and refraining from attendance at labor fresh from scarlet fever, erysipelas, diphtheria and streptococcic infections.

#### TOXAEMIA BY PRENATAL CARE

One of my own internes last month violated his orders, conducting an autopsy on a patient brought into the hospital dying from a criminal abortion. Out of a clear sky seven cases of sepsis in the ward were the immediate result.

Oliver Wendell Holmes in 1845 called this the private pestilence. We are generally responsible for childbed fever.

By pre-natal care maternal toxæmia may be practically prevented. Our good friend, Dr. De Lee tells me that in 40,000 cases of delivery in the Chicago Lying-in Hospital no death from eclampsia has occurred among the women who had been given pre-natal care.

So many factors combine to increase mortality that we must needs keep up the warfare to expect any improvement in statistics.

The hospitals which a hundred years ago were death traps to prospective mothers are to-day practically clear of sepsis and toxæmia. It is among the general practitioners doing the work in the home without adequate facilities, no sterile equipment, no rubber

gloves, often no nurse, that reforms must be brought about.

This is not a pleasant subject but we must face the facts. The remedy is so simple, disregarding the warning so disastrous, that it would seem only necessary to call to our attention the fact of 20,000 deaths in labor, nearly equalling the annual mortality in tuberculosis, its next competitor. These deaths are a needless sacrifice!

It is to be hoped that the figures may some way be changed so that not New Zealand, but America may hold the record as the country having the lowest maternal mortality.

Obstetrics is the one branch of medicine which will never become specialized so far as its principal volume is concerned—the great bulk of deliveries will remain to be done in the home and by the general practitioner. The reason for this is two-fold, it is due to tradition. "It is nature's function to have a baby." Second, it is a matter of economic necessity. The high cost of hospitalization and trained nurses makes it prohibitive to the person of limited income to avail of these advantages.

In the few minutes allotted, it is only allowed to suggest a brief list of the reforms needed to be added to asepsis and pre-natal care. These are in reference to undue frequency of Cæsarian section, which results from the general practitioner calling a surgeon instead of an obstetrician when he needs assistance.

The inexperienced young surgeon only knows one form of obstetric procedure. That is a section. The melancholy indictment of Franklin Newell of Harvard as to the enormous death rate in these cases delivered by laparotomy after ineffectual attempts at forceps and version or at least innumerable vaginal examinations, discloses the result of this practice.

The line which differentiates artistic skill from meddlesome midwifery is a matter of individual mentality, training and experience. Dr. De Lee is certainly capable of many operative expedients from which the average man must hesitate.

Then there is our old *bete noir*—pituitrin, which like all powerful remedies is so subject to abuse. The cases of ruptured uterus of the mother and brain hemorrhages of the new born which result from pituitrin would be unbelievable, except for the proofs which are found in every large clinic with a referred clientele.

#### CONCLUSIONS:

1. Prenatal care is *absolutely* essential.
2. Watchful waiting is advised. Consider

the lowly midwife and her mortality far superior to our own.

3. Asepsis—by wearing gloves, by avoiding unnecessary examination.

4. Caesarian section nor version are universal panaceas for obstetric grief, but each has a place under conditions demanding it.

5. Pituitrin is a dangerous drug, especially so in primipara and in dystocia.

#### DOCTOR FERNADO CORTEZ ROSE

Dr. F. C. Rose, Allen, for many years a practitioner at that place was instantly killed March 3rd when his automobile turned over on Allen-Steedman Highway. Dr. Rose was born in Bruno, Arkansas, December 25, 1874. Obtaining his preliminary education at the Peabody Normal School, he graduated in medicine from the College of Physicians and Surgeons, Little Rock, 1901. After practicing at Lead Hill, Arkansas, until 1910, he located at Allen where he has since lived. He has been affiliated with the Pontotoc County Society since that time, had held many positions of trust, enjoyed a large practice and is mourned by many friends. Dr. Rose is survived by his wife, Mrs. Maud Rose, and three daughters, Hazel, Irene and Mrs. Hugh Lackey, Healdton.

#### RESOLUTIONS:

Adopted by the Pontotoc County Medical Association, Ada, Oklahoma, on the death of Doctor F. C. Rose of Allen, Oklahoma,

Whereas: death has called from our midst our honored and respected member Dr. F. C. Rose, and Whereas, the passing of Dr. F. C. Rose leaves an irreparable void and a feeling of sincere regret and sadness in the hearts of his wife and daughters and patients and Whereas, during his connection with the Pontotoc County Medical Society he demonstrated his superior worth and ability, at all times, radiating kindness, hope and cheerfulness among his associates, to such an extent that his untimely passing to the Great Beyond has produced feelings not possible to describe in mere words.

Therefore, Be it resolved: That the Pontotoc County Medical Association record their feelings of sadness, regret and profound respect upon his unfortunate demise: that his death be entered upon our official records as a distinct loss to society, the medical profession and the many friends who deemed it a privilege to know him.

Be it further resolved: That copies of this be sent to the bereaved family and the Oklahoma State Medical Association.

L. M. OVERTON,  
CATHERINE BRYDIA,  
JOS. G. BRECO.

Committee, Pontotoc County Medical Association.

#### A HIGH STANDARD

Every batch of Neoarsphenamine, produced in The Dermatological Research Laboratories, is required to pass a toleration test of 400 mgs, or better per kilo of bodyweight as against the gov-

ernment requirement of 240 mgs. This is in excess of 60% higher than the official standard.

This high toleration combined with a curative value practically equal to Arsphenamine, places the D. E. L. product in a class by itself.

Literature on request to The Abbott Laboratories, Chicago.

#### TO OKLAHOMA OCULISTS

Our policy of soliciting optical prescription work from the Oculist exclusively and our advertising campaign to the general public by newspapers, direct circularizing, pamphlets, etc., with the intention of educating the public that the Oculist (eye physician) is the one to consult for defective vision or other eye trouble, has caused those who are unfriendly to this policy to circulate rumors that are unfounded, misleading and harmful to our business.

In defense we therefore make the following affidavit which we trust will show that we are an independent concern, and silence the inference that our purchasing powers or ethical methods are controlled by any optical combination.

Yours very respectfully,

O. H. GERRY OPTICAL COMPANY.

#### AFFIDAVIT

County of Jackson)

) ss.

State of Missouri)

O. H. Gerry of lawful age, having been duly sworn, states that he is President of the O. H. Gerry Optical Company, a corporation, and knows of his own knowledge that said company is not in any way connected or affiliated with any other Manufacturing, Wholesale or Retail Company and that ALL the stock in the said O. H. Gerry Optical Company is owned and controlled by this affiant and M. A. Murphy, Vice President and Secretary of the Company.

(Sgd.) O. H. GERRY.

Subscribed and sworn to before me this 25th day of February, 1925.

Term expires

(Sgd.) Bessie E. Warford.

July 14th, 1927.

(L. S.) Notary Public.

#### NATIONAL HOSPITAL DAY

TUESDAY, MAY 12

Tuesday, May 12th, is National Hospital Day. All Hospitals in the State are urged to take advantage of this day and in some way interest the public in your Hospital. You will find suggestions in the Hospital magazines relative to the different ways of carrying on the program. The Hospital Day Committee of Oklahoma will be glad to furnish you with any information you may desire relative to Hospital Day.

We are very anxious that every Hospital in the State, regardless of its size, or location, help carry on this program of education.



# THE JOURNAL

OF THE

## Oklahoma State Medical Association

Issued Monthly at Muskogee, Oklahoma, under direction  
of the Council

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DR. CLAUDE A. THOMPSON.....Editor-in-Chief  
308 Barnes Building, Muskogee, Okla.

DR. P. P. NESBITT.....Associate Editor  
814 Surety Building, Muskogee, Okla.

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Articles sent this Journal for publication and all those read at  
the annual meetings of the State Association are the sole property  
of this Journal. The Journal relies on each individual contribu-  
tor's strict adherence to this well-known rule of medical journalism.  
In the event an article sent this Journal for publication is pub-  
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Failure to receive the Journal should call for immediate notifi-  
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Local news of possible interest to the medical profession  
notes on removals, changes in address, deaths and weddings will  
be gratefully received.

Advertising of articles, drugs or compounds unapproved by the  
Council on Pharmacy of the A. M. A., will not be accepted.

Advertising rates will be supplied on application. It is sug-  
gested that wherever possible members of the State Association  
should patronize our advertisers in preference to others as a  
matter of fair reciprocity.

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### EDITORIAL

#### THE TULSA MEETING

Elsewhere in this issue appears the program of the Tulsa Meeting, to be held in the new Mayo Hotel, May 12, 13, 14. This program may have a few alterations in the small hand program issued for the convenience of those who will register at the meeting, but it contains practically everything to be offered. The clinics to be presented by the various hospitals will be bulletined daily from the registration desk at the hotel, and will thus be up to the minute, providing for last minute changes and alterations. They promise to be of the highest worth to those fortunate enough to be able to attend the

meeting, and as our clinics are always interesting, they should be largely attended.

It is not out of place here to urge every member who can possibly do so, to drop for a time, his duties at home and attend this meeting. Tulsa physicians are optimistic in their predictions for a record breaking attendance. Among some of the features will be the presence of Colonel M. L. Maus, of the Army and Navy Hospital, Hot Springs, who comes with a message setting forth clearly some of the manifold advantages and phenomena of the little known Hot Springs waters. Dr. Franklin Martin, Chicago, Editor of *Surgery, Gynecology and Obstetrics* and Secretary of the American College of Surgeons will also be present for the purpose of laying before our membership further details of the Gorgas Memorial. Both of these features are new and should be given close attention.

The entire sixteenth floor of the hotel has been set aside for the meeting. Here will be found the registration, information, exhibits and section meeting places. In the hotel will also be held the General meeting and various receptions and social functions.

#### YOUR ANNUAL MEETING PAPER

First, after the meeting, "Your" paper becomes "Our" paper, and again we urge you not to overlook that fact. Too often it has been either overlooked or ignored. It should not be forgotten that when a paper is read at the Annual Meeting it automatically becomes the property of your Association and your JOURNAL. If it is carried away for any purpose, confusion nearly always results, sometimes total loss. These papers are, or should be, of sufficient importance to call for the utmost care in their preparation, from the scientific standpoint as well as that of mechanical, grammatical and artistic points. It is to be hoped that the simpler rules of preparation will be followed. In this matter it should not be forgotten that the person who is to discuss the paper should have advance information as to the paper's contents, either a carbon copy or a full synopsis of it should be mailed by the author well in advance of the meeting, so the discussor may be intelligently informed as to what he is to speak upon. If this is not done, naturally the discussion may be widely astray. Papers should be typewritten, carefully corrected, then rewritten in duplicate or triplicate, double spaced, with wide margins. Such preparation satisfies the most exacting printer and results in general good feeling. By all means the pa-

per should have its title first, then the author's name and address, with the further statement that it was read in the particular section to which it is allotted.

A recent series of articles by Drs. Geo. H. Simmons and Morris Fishbein, for years at the editorial masthead of the *Journal, A.M.A.* are well worth reading by everyone contemplating the presentation of a paper upon any medical subject, which will eventually come up for publication.

Good or poor, finished or unfinished, please hand it in at the meeting. You will have ample proof of the article before it is printed in your JOURNAL.

### TULSA HOTEL RESERVATIONS

Tulsa is always crowded. For this reason those contemplating attendance at the meeting should make their hotel reservations at once. The new Mayo Hotel will prove an eye-opener to those who are not easily impressed by the magnificence of the modern hotel. Little has been left undone to make it one of the finest in the country. The management has announced attractive rates, reasonable enough to satisfy the most exacting. As all meetings will be held in this hotel it will be of great convenience to make your stay where the feasts will be held and the crowds assemble.

### *Editorial Notes—Personal and General*

DR. E. A. CAMPBELL, Heavener, was married to Miss Iler King of Shreveport, La., at Homer, La., on April 15, 1925. After a wedding tour the couple will make their home in Heavener.

WASHINGTON COUNTY MEDICAL SOCIETY, represented by Drs. Somerville, Weber, Rammell, Green, Shipman, Woodring and Athey, attended the monthly meeting of the Osage County Society at Pawhuska, April 7th. Dr. Harry C. Weber, Bartlesville, read a paper on "Diagnosis and Surgical Treatment of Renal Calculus".

AMERICAN BOARD OF OTOLARYNGOLOGY. The next examination conducted by the American Board of Otolaryngology will be held at the Ambassador Hotel, Atlantic City, on Tuesday, May 26th at 9 A. M. Application blanks may be obtained from Dr. H. W. Loeb, Secretary, 1402 South Grand Boulevard, St. Louis, Missouri.

STEPHENS COUNTY MEDICAL SOCIETY held its regular monthly meeting at the Court House, in Duncan, Mar. 31st. The scientific program consisted of a paper by Dr. C. T. Caracker, entitled: "Local Anaesthesia", and a paper with three case reports by Dr. W. S. Ivy, entitled: "Puerperal Eclampsia." Both papers were freely discussed. Dr. J. H. Linzy, of Comanche, was added as a new member.

MRS. J. D. WARFORD, Erick, wife of Dr. Warford has been confined to her home by sickness.

DR. L. A. McCOMB, Wilson, is reported removing to St. Joseph, Mo.

HUGHES COUNTY MEDICAL SOCIETY met at Calvin, March 24, with a good attendance.

DR. L. T. GOOCH, Lawton, has returned from a hunting trip through Southern Texas and Old Mexico.

DR. I. D. WALKER, Blackwell, returned recently after an operation for appendicitis, and is regaining his health.

DR. T. T. SHAKELFORD, Haskell, has resumed his practice there, after an absence of several months.

DR. J. M. Denby, Carter, was an interested member in attendance at the last meeting of the Beckham County Society.

DR. W. D. OLIVER, Erick, left recently for Chicago where he will attend the clinics devoted to the diseases of the rectum and colon.

DR. G. H. PHILLIPS, Pawnee, has been ill at Oklahoma City, and is under the care of Dr. A. L. Blesh.

DR. E. S. KILPATRICK, Elk City, returned from Kansas City where he had been attending some lectures on electro-therapeutics.

PAYNE COUNTY MEDICAL SOCIETY will meet at Stillwater, Wednesday evening May 6th, at 7:30; program is being arranged by the Stillwater members of the Society.

DR. JOHN A. MARTIN, Cushing, will represent Payne County Society as delegate to the State meeting at Tulsa, Dr. Benjamin Davis, Cushing, being alternate.

DR. CHARLES E. SEXTON, Stillwater, is acting in the capacity of Supreme Medical Director of a newly organized Benevolent Association, whose home office is located at Stillwater.

THE STATE BOARD OF MEDICAL EXAMINERS has been reduced in number from nine members to seven, as a result of the signing by Governor Trapp of the bill authorizing the reduction. The new Board, which will hold office until 1929, now consists of Dr. Wm. P. Fite, Muskogee, Dr. Harper Wright, Grandfield, Dr. Harry C. Weber, Bartlesville, Dr. William T. Ray, Gould, Dr. D. W. Miller, Blackwell, Dr. L. E. Emanuel, Chickasha and Dr. J. M. Byrum, Shawnee, who was reappointed Secretary.

BECKHAM COUNTY MEDICAL SOCIETY held its fourth regular meeting at Sayre, April 6th. Dr. McLain Rogers, Clinton, was one of the speakers. A motion picture about Tuberculosis was exhibited at a local motion picture house for the benefit of the public. Delegates for the Tulsa meeting were elected. The next regular meeting will be held at Erick, May 4th, two papers "The Medical Profession and the Business World" by Dr. G. H. Stagner, Erick, and "The Abdominal Cavity", by Dr. J. E. Standifer, Elk City, being on the program.



**CONDENSED PROGRAM****OKLAHOMA STATE MEDICAL ASSOCIATION  
THIRTY-THIRD ANNUAL MEETING, MAY 12, 13, 14, 1925**

Mayo Hotel, Tulsa, Oklahoma

**MONDAY, MAY 11TH.**

8:00 P. M. Meeting of the Council at the Mayo Hotel.

**TUESDAY, MAY 12TH.**

Registration: On the 16th floor of Mayo Hotel.

8:00 A. M. Clinics at the Morningside, Oklahoma, Physicians &amp; Surgeons, Sand Springs, and Tulsa Hospitals.

9:00 A. M. Registration of visiting ladies.

11:00 A. M. Meeting of the House of Delegates at the Mayo Hotel.

1:00 P. M. Scientific Programs; Sections on General Medicine, Neurology, Pathology, and Bacteriology; Eye, Ear, Nose and Throat; Genito-Urinary, Dermatology and Radiology; Obstetrics and Pediatrics; and Surgery and Gynecology, at the Mayo Hotel.

8:00 P. M. General Session, Mayo Hotel.

**WEDNESDAY, MAY 13TH.**

Registration: On the 16th floor, Mayo Hotel.

8:00 A. M. Clinics at the various Hospitals.

8:00 A. M. Meeting of the House of Delegates at the Mayo Hotel.

12:00 M. Dinner, Kappa-Psi fraternity.

1:00 P. M. Luncheon for visiting ladies at the Oakhurst Country Club, followed by an auto drive.

1:00 P. M. Scientific Programs, all Sections.

6:00 P. M. Dinner, Medical Reserve Officers, at the Mayo Hotel.

6:00 P. M. Dinner, Oklahoma State Hospital Association, at the Mayo Hotel.

6:30 P. M. Dinner, American College of Surgeons, at the Mayo Hotel.

9:00 P. M. President's informal Reception and Dance, at the Mayo Hotel Ballroom.

**THURSDAY, MAY 14TH.**

8:00 A. M. All Section Meetings remaining uncompleted.

## OKLAHOMA STATE MEDICAL ASSOCIATION PROGRAM

Thirty-Third Annual Meeting, Tulsa, Oklahoma,  
May 12, 13, 14, 1925.

### GENERAL INFORMATION

All meetings will be held in the Mayo Hotel, 16th floor.

**PAPERS:** All papers read before any section or the General Session are the property of the Association and should be prepared with their future publication in the JOURNAL in mind. Under no circumstances should they be carried away from the meeting, but should be handed to the presiding officers of the meeting upon being read.

**THE COUNCIL:** will meet at the Mayo Hotel at 8:00 P. M. Monday, May 11th, and afterwards on call of the President. All matters of a business nature must be presented to this body for action. All appeals or controversies from individuals or county societies must be presented to this body for action.

**HOUSE OF DELEGATES** will meet at 11:00 A. M., Mayo Hotel, Tuesday, May 12th. Delegates should present their credentials to the credentials Committee Representative, Registration desk, front of elevators, 16th floor, Mayo Hotel. The House will also meet at 8:00 A. M. Wednesday, May 13th. The first order of business of this meeting will be the Annual Election of officers. All other meetings will be on call of the President.

**THE GENERAL MEETING** will be held at 8:00 P. M. Tuesday, May 12th.

**CLINICS** will be held at the following Tulsa Hospitals: Oklahoma, Tulsa, Morningside, Physicians and Surgeons and Sand Springs Hospitals. The work to be offered by each of these will be bulletined during the meeting, before they are held. Bulletins to be obtained at the registration office. Clinics will begin at 8:00 A. M. Tuesday and Wednesday, May 12 and 13th.

**SCIENTIFIC SECTIONS** will begin at 1:00 P. M., Tuesday, May 12th and on the same hour of Wednesday, May 13th. Papers will be read in the order of their appearance on this program. Papers passed will be called for until finally presented or at the next meeting of the Section. When read, papers should be handed to the section officers.

**ENTERTAINMENT OF THE LADIES** attending the meeting is in the hands of a local Tulsa Committee, Mrs. Hubert Y. Callahan, Chairman, 1411 South Newport. Among the features of this entertainment will be a luncheon at 1:00 P. M., May 13th at the Oakhurst Country Club, followed by a drive. Other attractive affairs are being arranged. This work will be greatly aided by those proposing to attend the luncheon mailing Mrs. Callahan information that they intend to be present.

**PRESIDENT'S RECEPTION AND DANCE** will be held at the Mayo Hotel Ballroom beginning at 9:00 P. M., May 13th.

**AMERICAN COLLEGE OF SURGEONS' Dinner,** Dr. LeRoy Long, Colcord Bldg., Oklahoma City, District President, announcing a dinner for their members at the Mayo Hotel, 6:30 P. M., May 13th. Reservations may be made by writing Dr. Long.

**MEDICAL RESERVE OFFICERS** will have a dinner at the Mayo Hotel 6:00 P. M., May 13th. Those desiring to attend should communicate with Dr. Frank H. McGregor, Mangum, who is booking reservations for the dinner, or with Dr. Paul R. Brown, 310 Nat'l. Bank of Commerce Bldg., Tulsa.

**KAPPA-PSI Fraternity Dinner** at 12 o'clock noon Wednesday, May 13th; those desiring to attend will please notify Dr. I. N. Tucker, Daniels Bldg., Tulsa, for reservation.

**OKLAHOMA STATE HOSPITAL ASSN.,** will have a dinner at the Mayo Hotel on Wednesday evening, May 13th, at 6 o'clock, in conjunction with the members of the State Medical Assn., who are interested in good hospitals. Dr. Jabez N. Jackson, Kansas City, will deliver a short address, "The Evolution of Hospitals". Those desiring to attend will please notify Dr. Fred S. Clinton, New World Bldg., Tulsa.

## COMMITTEE CHAIRMEN FOR THE TULSA MEETING

**Dr. Roy W. Dunlap, General Chmn.**  
610 Palace Bldg.

Dr. R. Q. Atchley,.....Entertainment  
315 Palace Bldg.

Dr. C. A. Dillion,.....Badges  
304 Palace Bldg.

Dr. C. T. Hendershot,.....Hotels  
19 Old Daniels Bldg.

Dr. W. A. Cook,.....Meeting Places  
506 Palace Bldg.

Dr. C. H. Haralson,.....Exhibits  
527 Wright Bldg.

Dr. H. P. Price,.....Stereopticons  
711 Bank of Commerce Bldg.

Dr. A. W. Pigford, Hospitals & Clinics  
510 Palace Bldg.

Dr. C. H. Ball,.....Publicity  
11 Old Daniels Bldg.

Meeting Place: New Mayo Hotel  
5th and Cheyenne Sts.  
16th Floor

May 12th, 13th, and 14th, 1925.



## PROGRAM FOR GENERAL SESSIONS, Mayo Hotel Ballroom

Tuesday Evening, May 12th, 8 P. M.

DR. HORACE T. PRICE, President, Tulsa County Medical Society, presiding.

*Call to order*—DR. HORACE T. PRICE, Tulsa.

*Invocation*—THE RT. REV. FRANCIS C. KELLEY, L. L. D., Bishop of Oklahoma.

*Solo*—MRS. M. H. KOTZEBUE, Tulsa.

*Address of Welcome*—HONORABLE AUSTIN FLINT MOSS.

*Response*—DR. FRANK H. MCGREGOR, Mangum.

*President's Address*—DR. PLEASANT P. NESBITT, Muskogee.

*Address*—DR. FRANKLIN MARTIN, Chairman Board of Directors, Gorgas Memorial.

*Solo*—MRS. M. H. KOTZEBUE, Tulsa.

### SECTION MEETINGS

#### SURGERY AND GYNECOLOGY

DR. L. A. HAHN, Chairman, Guthrie.

DR. STRATTON E. KERNODLE, Secretary, Oklahoma City.

1. Chairman's Address—"The Surgical Prostate"—DR. L. A. HAHN, Guthrie.
2. "Fundamentals For Efficient Medical Service in Hospitals"—DR. MILTON T. MAC-EACHERN, Chicago, representing the American College of Surgeons.
3. "Injuries to the Small Bones of the Hand and Wrist"—DR. FRED Y. CRONK, Tulsa.  
Discussion opened by DR. F. L. CARSON, Shawnee.  
Discussion continued by DR. A. R. WILEY, Tulsa.
4. "Inflammatory Bone Troubles"—DR. A. V. EMERSON, Tulsa.  
Discussion opened by DR. W. G. LEMMON, Tulsa.
5. "Injuries to the Wrist Joints—A Plea for More Accuracy in Diagnosis and Treatment"—DR. EARL D. MC BRIDE, Oklahoma City.  
Discussion opened by DR. DAN GRAY, Guthrie.
6. "Some Important Features in the Treatment of Fractures"—DR. FRED S. CLINTON, Tulsa.  
Discussion opened by DR. MC LAIN ROGERS, Clinton.

7. "Thyroidectomy, Operative Safeguards and Indications"—DR. A. L. BLESCH, Oklahoma City.  
Discussion opened by DR. R. M. HOWARD, Oklahoma City.
8. "Principles and Management of Toxic Goitre"—DR. MARVIN E. STOUT, Oklahoma City.  
Discussion opened by DR. L. E. EMANUEL, Chickasha.  
Discussion continued by DR. W. P. FITE, Muskogee.
9. "The Significance of Pain in Right Lower Quadrant"—DR. L. J. STARRY, Oklahoma City.  
Discussion opened by DR. HORACE REED, Oklahoma City.
10. "Tuberculoma of the Intestine, with Report of a Case"—DR. LEROY LONG, Oklahoma City.  
Discussion opened by DR. S. N. MAYBERRY, Enid.
11. "Perforated Gastric and Duodenal Ulcer"—DR. S. E. KERNODLE, Oklahoma City.  
Discussion opened by DR. JOHN W. RILEY, Oklahoma City.
12. "Meckel's Diverticulum"—DR. A. S. RISER, Blackwell.  
Discussion opened by DR. RALPH V. SMITH, Tulsa.
13. "Post Operative Care"—DR. J. M. BYRUM, Shawnee.  
Discussion opened by DR. H. C. WEBER, Bartlesville.
14. "Surgical Treatment of Puerperal Eclampsia"—DR. E. B. DUNLAP, Lawton.  
Discussion opened by DR. J. F. KUHN, Oklahoma City.
15. "Extra-Uterine Pregnancy"—DR. S. F. WILDMAN, El Reno.  
Discussion opened by DR. T. M. ADERHOLD, El Reno.
16. "Skin Transplantation"—DR. CURT VON WEDEL, Oklahoma City.  
Discussion opened by DR. F. L. WATSON, McAlester.

### ABSTRACT DEPARTMENTS

Will not be published this month, nor in the June JOURNAL on account of these issues being taken up with matter concerning the Annual Meeting. Publication of the Abstract Departments will be resumed with the July number of the JOURNAL.

# GENERAL MEDICINE, NEUROLOGY, PATHOLOGY AND BACTERIOLOGY

DR. H. T. BALLANTINE, Chairman, Muskogee.

DR. HORACE T. PRICE, Secretary, Tulsa.

Chairman's Address—

1. "*Thrombosis, With Special Reference to Coronary Thrombi*"—DR. H. T. BALLANTINE, Muskogee.
2. "*Physiological Effects and Therapeutic Values of Radio-Active Waters in the Treatment of Diseases and Injuries*."—COL. L. MERVIN MAUS, U. S. A. Retd., Hot Springs, Ark.  
Discussion opened by DR. R. L. MITCHELL, Muskogee.
3. "*Cirrhosis of the Liver*"—DR. R. Q. ATCHLEY, Tulsa.  
Discussion opened by DR. PAUL ATKINS, Tulsa.
4. "*Diagnosis*"—DR. WILLIAM A. TOLLESON, Eufaula.  
Discussion opened by DR. CHARLES W. HEITZMAN, Muskogee.
5. "*A Brief Consideration of Diphtheria with Especial Advantages of Intravenous Administration of Antitoxin*"—DR. JOHN A. HAYNIE, Durant, Okla.  
Discussion opened by DR. T. H. MC CARLEY, McAlester.
6. "*The Mind Diseased*"—DR. A. L. STOCKS, Muskogee.  
Discussion opened by DR. C. P. MURPHY, Veterans Hospital, Muskogee.
7. "*Orthostatic Albuminuria*."—DR. T. H. MCCARLEY, McAlester.  
Discussion opened by DR. A. B. LEEDS, Chickasha.
8. "*Medical History*"—DR. LEA A. RIELY, Oklahoma City.  
Discussion opened by DR. L. J. MOORMAN, Oklahoma City.
9. "*A New Method of Treating Chronic Pulmonary Tuberculosis*"—DR. BASIL A. HAYES, Oklahoma City.  
Discussion opened by DR. A. K. WEST, Oklahoma City.
10. "*Acute Nephritis Following Peritonsillar Abscess*"—DR. J. G. SMITH, Bartlesville.  
Discussion opened by DR. L. D. HUDSON, Dewey.
11. "*Some Difficulties in the Diagnosis of Disease of the Stomach*"—DR. LEONARD C. WILLIAMS, Pawhuska.  
Discussion opened by DR. A. W. WHITE, Oklahoma City.

12. "*The Value of Artificial Pneumothorax in the Treatment of Pulmonary Conditions*"—DR. L. J. MOORMAN, Oklahoma City.  
Discussion opened by DR. HORACE T. PRICE, Tulsa.
13. "*Arterial Accidents in the Brain*"—DR. ANTONIO D. YOUNG, Oklahoma City.  
Discussion opened by DR. J. E. DWYER, Tulsa.
14. "*Nervous Mechanism of Digestion*"—DR. ARTHUR W. WHITE, Oklahoma City.  
Discussion opened by DR. ANTONIO D. YOUNG, Oklahoma City.
15. "*Oklahoma Flora in Its Relation to Hay Fever and Asthma*."—DR. RAY M. BAILY, Oklahoma City.  
Discussion opened by DR. T. G. WAILS, Oklahoma City.

# GENITO-URINARY, DERMATOLOGY, AND RADIOLOGY

TUESDAY, MAY 12th, 1925.

DR. E. L. COHENOUR, Chairman, Tulsa.

DR. C. J. WOODS, Secretary, Tulsa.

Guest of Honor—DR. NELSE F. OCKERBLAD, Kansas City.

1. *Chairman's Address*—DR. E. L. COHENOUR, Tulsa.
2. "*X-ray Therapy in Dermatology*"—DR. CHAS. H. BALL, Tulsa.  
Discussion opened by DR. CURTIS R. DAY, Oklahoma City.
3. "*The Correlation between Radio-Therapy and Surgery*"—DR. M. M. ROLAND, Oklahoma City.  
Discussion opened by DR. C. J. WOODS, Tulsa.
4. "*Some Radiological Aspects of Appendicitis*"—DR. L. H. STUART, Tulsa.  
Discussion opened by DR. JOHN E. HEATLEY, Oklahoma City.
5. "*The Roentgenological Diagnosis of Duodenal Ulcer*"—DR. S. C. VENABLE, Tulsa.  
Discussion opened by DR. H. LEE FARRIS, Tulsa.

WEDNESDAY, MAY 13th, 1925.

6. "*Some Problems in the Differential Diagnosis Between Retroperitoneal and Intra-peritoneal Lesions*"—DR. NELSE F. OCKERBLAD, Kansas City.

Dr. Ockerblad's paper will be read in joint session with Section on Surgery and Gynecology.

Discussion opened by DR. REX BOLEND, Oklahoma City.



7. "Renal Tuberculosis"—DR. J. W. ROGERS, Tulsa.  
Discussion opened by C. B. TAYLOR, Oklahoma City.
8. "Pyelo-Nephritis"—DR. W. J. WALLACE, Oklahoma City.  
Discussion opened by DR. R. S. LOVE, Oklahoma City.
9. "Perinephritis"—DR. J. Z. MRAZ, Oklahoma City.  
Discussion opened by DR. F. J. BAUM, McAlester.
10. "Renal Calculi"—DR. MALCOLM MCKELLAR, Tulsa.  
Discussion opened by DR. J. H. HAYS, Enid.
6. "The Secondary Anemias of Infants and Children"—DR. H. LESLIE MOORE, Dallas, Texas.  
Discussion opened by DR. A. L. SALOMON, Oklahoma City.  
Discussion continued by DR. JULIAN FEILD, Enid.
7. "Pernicious Vomiting in Pregnancy"—DR. EDWARD P. ALLEN, Oklahoma City.  
Discussion opened by DR. D. M. MAC DONALD, Tulsa.  
Discussion continued by DR. THOMAS H. FLESHER, Edmond.
8. "The Problem of Rural Obstetrics and Pediatrics in Oklahoma"—DR. LUCIE SPIRE BLACHLEY, Oklahoma City.  
Discussion opened by DR. C. E. BRADLEY, Tulsa.  
Discussion continued by DR. JAMES G. BINKLEY, Oklahoma City.
9. "The Management of Puerperal Sepsis"—DR. W. H. LIVERMORE, Chickasha.  
Discussion opened by DR. DICK LOWRY, Oklahoma City.  
Discussion continued by DR. ROSCOE WALKER, Pawhuska.

#### OBSTETRICS AND PEDIATRICS

DR. CARROLL M. POUNDERS, Chairman, Oklahoma City.

DR. C. E. BRADLEY, Secretary, Tulsa.

TUESDAY, MAY 12th, 1925.

1. Chairman's Address—"Intracranial Hemorrhage in the Newborn"—DR. CARROLL M. POUNDERS, Oklahoma City.
2. "Tuberculosis in Early Infancy"—DR. W. M. TAYLOR, Oklahoma City.  
Discussion opened by DR. L. J. MOORMAN, Oklahoma City.  
Discussion continued by DR. T. C. SANDERS, Shawnee.
3. "The Use of Nitrous Oxide Gas and Oxygen in Obstetrics"—DR. JOHN L. DAY, Norman.  
Discussion opened by DR. WALTER W. WELLS, Oklahoma City.  
Discussion continued by DR. P. N. CHARBONNET, Tulsa.
4. "Spinal Deformities in Older Children"—Lantern slide demonstrations—DR. W. K. WEST, Oklahoma City.  
Discussion opened by DR. J. A. HATCHETT, Oklahoma City.  
Discussion continued by DR. J. P. TORREY, Bartlesville.

WEDNESDAY, MAY 13th, 1925.

5. "Rectal Examination in Labor as a Diagnostic Procedure and Aseptic Precaution"—DR. W. A. DEAN, Tulsa.  
Discussion opened by DR. C. V. RICE, Muskogee.  
Discussion continued by DR. WALTER W. WELLS, Oklahoma City.

THURSDAY, MAY 14th, 1925.

10. "Food Requirements of the Infant"—DR. C. W. ARRENDELL, Ponca City.  
Discussion opened by DR. CLARK H. HALL, Oklahoma City.  
Discussion continued by DR. H. M. WILLIAMS, Oklahoma City.
11. "Cesarean Section"—DR. W. A. FOWLER, Oklahoma City.  
Discussion opened by DR. GEO. R. OSBORN, Tulsa.  
Discussion continued by DR. HORACE REED, Oklahoma City.
12. "Lactic Acid Milk in Artificial Feeding"—DR. C. V. RICE, Muskogee.  
Discussion opened by DR. C. E. BRADLEY, Tulsa.  
Discussion continued by DR. T. C. SANDERS, Shawnee.
13. "The Relation of Gynecology to Obstetrics"—DR. A. C. HIRSHFIELD, Oklahoma City.  
Discussion opened by DR. P. P. NESBITT, Muskogee.  
Discussion continued by DR. F. L. WATSON, McAlester.
14. "Diarrhea in Infants From the Standpoint of the General Practitioner."—DR. CATHERINE BRYDIA, Ada.  
Discussion opened by DR. A. W. NUNNERY, Chickasha.  
Discussion continued by DR. J. G. EDWARDS, Okmulgee.

## EYE, EAR, NOSE AND THROAT

DR. J. C. MACDONALD, Chairman, Oklahoma City.

DR. JAMES C. BRASWELL, Secretary, Tulsa.

1. Chairman's Address—DR. J. C. MACDONALD, Oklahoma City.
2. *"The Unusual in Eye, Ear, Nose and Throat Practice"*—DR. H. F. VANDEVER, Enid.  
Discussion opened by DR. A. S. PIPER, Enid.
3. *"The Physiology of the Semi-circular Canals"*—DR. T. G. WAILS, Oklahoma City.  
Discussion opened by DR. W. ALBERT COOK, Tulsa.
4. *"Some Observations on the Diagnosis and Treatment of Maxillary Sinusitis"*—DR. W. E. DIXON, Oklahoma City.  
Discussion opened by DR. J. C. MATHENY, Okmulgee.
5. *"The Etiology, Diagnosis and Treatment of Acute Middle Ear Disease"*—DR. HOWARD S. BROWNE, Ponca City.  
Discussion opened by DR. WM. M. GALLAHER, Shawnee.
6. *"Focal Infection"*—DR. L. C. KUYRKENDALL, McAlester.  
Discussion opened by DR. THOS. R. LUTNER, Lawton.
7. *"Salvarsan in Diseases of the Eye, Ear, Nose and Throat"*—DR. J. W. ECHOLS, McAlester.  
Discussion opened by DR. W. J. WALLACE, Oklahoma City.
8. *"Conservation of Nasal Functions"*—DR. CHAS. H. HARALSON, Tulsa.  
Discussion opened by DR. CHARLES M. FULLENWIDER, Muskogee.
9. *"Sympathetic Ophthalmia"*—DR. C. E. JONES, Tulsa.  
Discussion opened by DR. E. S. FERGUSON, Oklahoma City.
10. *"Chronic Suppurative Otitis Media"*—DR. C. A. DILLON, Tulsa.  
Discussion opened by DR. H. C. TODD, Oklahoma City.
11. *"Possibilities of Co-operation"*—DR. ALONZO C. MCFARLING, Shawnee.  
Discussion opened by DR. JAMES C. BRASWELL, Tulsa.
12. *"Foreign Body in Eye"*—DR. F. R. VIEREGG, Oklahoma City.

## TULSA MEETING

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The applicant for license, either by examination or reciprocity shall be a graduate of a medical school, the requirements of which for graduation shall have been, at the time of graduation, in no particular less than those prescribed by the Association of American Medical Colleges for that particular year.

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# THE JOURNAL

OF THE

## OKLAHOMA STATE MEDICAL ASSOCIATION

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No. 6

### FOR THE GOOD OF THE ORDER\*

P. P. NESBITT, M. D.  
MUSKOGEE

Under this broad heading it is desired to consider a few subjects of general interest.

The period since the beginning of the Twentieth Century has been one of rapid changes through-out the world, this is especially true of the years since the beginning of the World War. Due partly to these changed conditions, and partly to the progress which the Medical profession endeavors at all times to maintain, there has arisen a number of questions of profound interest, not only to the profession but to the people whom they serve.

One subject which has come in for wide spread discussion of late is the present condition of Medical Education. Since the beginning of the century most of the weaker and poorly equipped medical schools have gone out of existence. This has been accomplished in part by combining two or more schools, while the increased requirements of State Examining Boards have forced others to close. The State Examining Boards of most of the States now require of recent graduates that they be graduates of a four year high school, that they have two years of pre-medical college work, a four year medical course, and one year hospital internship in order to be examined for license to practice.

Friends of the present system point to the better equipment and teaching facilities of the present day school, the higher average education and better training of the recent graduates. Others who are not so well pleased with conditions, call attention to the fact that the longer time and increased cost of medical education is resulting in practically all the recent graduates locating in the cities and an increasing percentage going into specialty work without serving the apprenticeship in general practice which has always been regarded as a necessary part of their training.

The situation in our State is that except for the counties containing the larger, and rapidly growing cities, practically every county

now has fewer physicians than ten years ago. However, telephones and automobiles and improved road conditions have increased the number of patients these men are able to see to such an extent that the rural population as a whole can obtain more prompt and efficient medical service now than at any former time. This on the face of it would seem to be a satisfactory situation, but we must not lose sight of the fact that no recent graduates are locating in the rural districts, and that some day there must be replacements of the men now practicing there.

The work of the United States Veterans Bureau for the ex-service men has been severely criticised in the past, and in part at least, this has been justified. It is with satisfaction that we note the improvement in this service since the establishment of the Regional Office at Oklahoma City and provision for hospitalization within the State of most cases requiring such treatment. The Regional Office is answering all correspondence promptly and acting as rapidly as possible on all claims. United States Veterans Hospital No. 90 at Muskogee has been badly over-crowded for the past several months, but aside from that hospitalization of our ex-service men in this State has been about as satisfactory as it is possible for such a service to be.

Commendable improvement is being made in the administration of our State Department of Health. The chief concern of the Department at present is in the conduct of the Bureaus of Communicable Disease Control and Vital Statistics. A change in the system of reporting communicable diseases was put in effect during December of last year. This change is note-worthy for several reasons. It supplies the physician with a report form, self addressed, already containing his name, and franked so as not to require postage. This form is mailed regularly to each physician on Tuesday of each week, with the request that it be returned at the latest on Monday following the date stamped on the card itself. It is also requested that this card be returned whether the physician has any disease to report or not. In case he has no disease to report, the blank card is dropped in the post office without further trouble on the part of the physician. The card system

\* Presidential Address of P. P. NESBITT, M.D., Muskogee, Oklahoma State Medical Association, Tulsa Meeting, May 12, 1925.

of reporting permits them to forward to Washington a telegraphic report of the communicable disease occurring in the State each week. This report is required to be made in order to hold the franking privilege. The information contained in these reports is being tabulated both numerically and graphically in order that they may determine the normal for any given period of time for the State, and then by comparing the normal expectancy with the actual incidence they are able to predict with a remarkable degree of accuracy what can be expected for the succeeding month with regard to any one or all of the communicable diseases, and to aid in the control of them.

In the Bureau of Vital Statistics, it is the aim and ambition to have the State of Oklahoma included in the registration area of births and deaths. This will also give the franking privilege to all records of Vital Statistics. In addition thereto, the records will be accepted by the Census Department for statistical purposes, and a number of other benefits will accrue to the State which it would require too lengthly an explanation to go into here. Needless to say we cannot hope to obtain inclusion in the registration area for the State of Oklahoma without the active, whole-hearted co-operation of the physicians of the State. Only by receiving accurate, complete reports of all births and deaths occurring in the State can we hope to attain the goal for which we are striving.

The Bureau of Maternity and Infancy is making contact through out the State with Women's Clubs and civic organizations, with the end in view, of inducing expectant mothers to give themselves and their children proper care before and after birth, as well as at the time of delivery. When an expectant mother is located, she is sent letters and literature from the Department, and if possible, her name is turned over to a nurse in order that a personal contact may be established, and at least one visit, and more if possible, be made by the nurse. This Bureau is chiefly concerned with mothers and with children up to the age of six years. The Department has also been co-operating with the State University Extension Work, having a representative when possible, giving talks and holding child health conferences.

The State Laboratory is prepared to make all examinations of any importance in the maintenance of public health without charge for the physicians of the state. A list of biologies for free distribution to indigents is obtainable from the State Laboratory. Also containers for sending in the specimens to be

examined. The Department has a State Chemist who is willing and ready at all times to confer with city and county officials as regards sanitary problems such as water supply and sewage disposal. For more technical information on these subjects the Bureau of Sanitary Engineering is maintained to co-operate with municipal authorities.

The collection of license fees and the inspection of hotels, restaurants, groceries, drug stores, etc., is taken care of by the Department of Sanitary Inspection.

The Full Time County Health Work, inaugurated in July of last year, has expanded until at the present time there are six counties maintaining Health Officers on a full time basis. It is the duty of these men to investigate each and every case of communicable disease, which occurs in a county, to offer the physicians of the county such assistance as they may require in the control of the disease and in the case of Typhoid, Diphtheria and Smallpox, to offer free of charge, to all who will accept it, prophylactic vaccination against the several diseases mentioned. They also keep a record of the number of cases of Malaria in their county, and are prepared to examine the source of the infection. Where the infection is general among the population, they are also prepared to give the Bass standard treatment free of charge to indigents. In addition to the above, these Full Time Health Officers act as the official local representative of the State Department of Health, and prosecute the work of the various central bureaus. It is also required of the Full Time Health Officers that a thorough examination be made of each school child in their county once each year for the detection of defects. Such defects as can be corrected are reported to the parents, with recommendations, and a check examination is made to see whether the corrections have been made. The Unit maintains also a Sanitary Inspector, whose duty it is to advise the various towns and with individuals in the rural sections of the county on matters pertaining to water and sewage and general sanitation. A nurse is employed to aid in the school examinations and to carry on the work of the Bureau of Maternity and Infancy. Each Unit also employs a clerk whose duty it is to keep the correspondence up to date, to meet visitors, and to tabulate the various communicable diseases and vital statistics reports. As a final duty, the Health Officer is required to urge the value of periodic physical examinations in connection with the Life Extension Work.

Periodic physical examinations are being urged by the medical profession, insurance



companies, and others interested in health work, as a means of detecting diseases in their early stages when they are more easily controlled, or in many cases the tendency may be discovered before disease actually appears and may be prevented from developing. As this becomes more general, together with the examination of school children, there will result a fall in the morbidity and mortality rates that will represent a distinct economic gain as well as an increase in the average life expectancy.

The regular medical profession has always held a well merited contempt for the advertising doctor and the members of the different cults and pathies who detail their wonderful methods and powers in the press. However, the success this gentry has had in muleting the sick and those who think themselves sick, leads us to wonder if we have done our part in informing and educating the public as to the status of medical science, what it has accomplished and the, as yet, unsolved problems it is working on. The American Medical Association for several years has been exposing medical fakes as well as attempting to determine the value of new remedies and methods, and also the value of those that have for some time been accepted as useful. The results have been given such publicity as they have been able to give, and for two years they have published the journal *Hygeia* for the purpose of getting this information to the public. In addition, they have sent speakers throughout the country to address public meetings. One of these speakers Dr. Morris Fishbein, visited our State a few months ago and delivered addresses to public meetings in different parts of the State. Following his visit President Lain appointed a committee to devise ways and means of carrying on this work within the State. This committee has prepared and adopted a lecture which is to serve as a guide to speakers in addressing the public. It is proposed to hold at least one meeting in every county of the State during the next year. It will be necessary for the local medical men, with such help as they are able to get from lay citizens who are interested in such matters, to arrange for these meetings, provide meeting places and give it such publicity as will insure a good attendance. It is proposed that the speaker be from outside the immediate locality so there can be no jealousy or charges that he is advertising himself or seeking to further his own selfish interest.

Let these addresses it is not desirable or permissible to enter into controversy with those holding differing beliefs. To do this would defeat the benefit to be derived. It

will be entirely sufficient for the speaker to present in an interesting way the accomplishments of the regular medical profession and the scientists and investigators who work in conjunction with them.

Since the middle of the last century, which period covers most of the development of modern medicine, the life expectancy of the people of this country has increased from forty years to fifty-eight years. This has been accomplished by improvements in sanitation and in the development of preventive medicines as well as improvements in the treatment of diseases. These accomplishments have been attained in every instance by methods perfected and advocated by the regular medical profession and their co-workers and usually in the face of the active opposition of those who deny the necessity of efficacy of such measures. A number of diseases which in the past have been scourges of mankind have been conquered. Others, though not conquered, their ravages have been greatly ameliorated. Many others have as yet defied all efforts to overcome them. Of these our enemies are very prone to taunt us and try to convey the impression that because we have as yet failed with them that we have failed in everything. The number of these is growing smaller, as some are being overcome. It is possible that some may never be conquered. But judging the future by the past we can confidently predict that if and when they are conquered it will not be by those who deny their existence, or by the adjustors of subluxations, but by the regular medical profession and their allies.

#### THROMBOSIS, WITH SPECIAL REFERENCE TO CORONARY THROMBI\*

H. T. BALLANTINE, M. D.  
MUSKOGEE

Having occasion recently to look up the literature on Thrombi I was struck by the lack of material dealing with these conditions. Such as found proved to be so fragmentary that it was of little use in aiding me to solve the problem I was then confronted with; it was scattered over a wide area of reading matter, and so badly corollated that it left me confused rather than clarified ideas, concerning the whole subject. The incidence of Thrombosis is not of such frequency that it plays an important role in the statistics of mortality; however, it occurs often enough to be regarded as one of the possible complications that may follow many diseases, sur-

\* Chairman's Address; read before the Section on General Medicine, Neurology, Pathology and Bacteriology, Annual Meeting Oklahoma State Medical Association, Tulsa, May 12, 13, 14, 1925.

gical operations, and obstetric deliveries, adding much to the seriousness of the prognosis and even being the direct cause of death itself.

For these reasons I have thought a brief resume of the subject might be of interest to you.

**Definition:** Thrombosis is that condition, where a clot forms in a blood vessel and remains at the site of its formation. This clot may be venous or arterial or capillary in character. It may be composed of Fibrin, and then is known as a Coagulation Thrombus. It may be chiefly of blood platelets and is then known as a Platelet Thrombosis. It is frequently caused by an embolus and then the condition is known as Embolic Thrombus.

Thrombosis in general is to be differentiated from embolism, in that the thrombi form in the vessel and remain at the site of the formation. This is true regardless of the cause of the clot. Emboli are clots which may and often do have their origin in thrombi but are carried in the circulation until such time as they plug a vessel and may then become the origin of a Thrombosis. Thrombosis is further to be differentiated from Phlebitis in that Phlebitis is limited to the veins, and may be simply an inflammation of that particular vein, tho thrombi do often form at the site of this inflammation, and, an inflammatory condition of the vessel wall is certainly one of the most potent causes of both Thrombosis and Embolism. Thrombosis is to be further differentiated from Infarction by the fact that an infarct is the infiltration of the surrounding tissues to the vessel, and is usually the result either of embolism or Thrombosis.

**Etiology:** Many Pathological conditions are followed by thrombosis, which may be an early manifestation or may come when the patient is apparently on the road to recovery and ready to leave the hospital.

Chief among the causes giving rise to this complication, may be mentioned, Typhoid Fever, Appendicitis, Septicæmia, Puerperal infection, fractures of the long bones, surgical operations, and traumatism to the vessel itself. This is by no means a completed list but comprises only those most frequently followed by Thrombosis. Any of the contagious diseases may at times produce Thrombosis, and marked Anemia, accompanied by an over production of blood platelets seem to predispose to this complication also. Here the presence of fibrin, in excessive quantities, may be held accountable for the formation of the clot within the vessel, giving rise to the so-called coagulation Thrombosis.

The increase generally in the platelet count in acute conditions is the probable explanation of the comparative frequency of thrombosis in these diseases.

**Pathology:** The thrombus may form along the side of the wall of the vessel, only partly filling the lumen, and is then known as a parietal Thrombus. Fresh deposits of material may be made upon this beginning, until the whole lumen is filled, when the condition then is known as an Occluding Thrombus. Additional deposits made to the parent thrombus, and an extension usually, tho not always, in the direction of the blood stream until the entire vessel is filled and an extension even into the connecting blood vessels.

The clot may be composed of red and white blood cells, platelets and fibrin in almost the same proportions as an extra-vascular clot which it will much resemble, these are known as red thrombi, and are usually caused from a sudden stoppage of the circulation. White thrombi are those made up almost wholly of fibrin and white cells or fibrin and blood platelets and are usually formed while the blood is in motion.

After a certain time these clots undergo one of several changes; either they are absorbed and the vessel returns to practically normal or there is a tendency to organization, with a permanent thickening of the wall; or there may be the deposit of Calcium Salts in and around the mass, and the so-called Phlebolith or vein stones result. Under ordinary circumstances the tendency is toward absorption but in exceptional cases degeneration occurs to the extent where the clot is loosened and an embolus results.

**Symptoms:** The symptoms arising from Thrombosis depends entirely upon the location of the thrombus. The most frequent site being the superficial veins of the leg. Here the condition is known as Phlebitis, and is most frequently seen in Puerperal Infection. The left leg is more frequently affected than the right. The onset may be sudden or insidious, marked first by a slight tenderness in the inner side of the thigh, a rise in temperature and a generalized aching. The leg becomes swollen, reddened and, exquisitely tender, sweating and marked prostration may occur. In fact, the condition becomes one of general septicæmia, with all of its attendant symptoms.

Where thrombosis of the peripheral arteries occur, gangrene of the part usually results.

This may continue until the loss of the part takes place or collateral circulation may be established, following the application of moist



heat and the use of vaso-dilators, and symptoms clear up.

Where Thrombi develops in the cerebral vessels paralysis follows, and is either temporary or permanent, dependent on whether collateral circulation is established, or absorption occurs, or organization of the clot with a permanency of the condition is established. In those rare cases of thrombosis of the portal vein, when occlusion is complete, petechial hemorrhages of the skin are an early manifestation of this condition. In the milder and non-occluding types, the symptoms may be so slight as to be entirely overlooked. In Thrombosis of the pulmonary vessels infarcts involving a considerable area of lung tissue, are not infrequent and may be followed by formation.

*Prognosis:* In all cases this should be guarded. The simplest cases carry with them the same grave possibilities as the most severe, and probably should be considered even more dangerous, in that it is more difficult to secure the cooperation of the patient in carrying out the treatment where the symptoms cause but little inconvenience. The danger, of course, in the case of Thrombosis of the extremities is first the disintegration of the clot with the formation of an embolus which may lodge anywhere. Second, gangrene of the part affected where thrombi are of arterial origin, and third, the permanent occlusion of the affected vessel without a sufficient compensatory circulation and a corresponding weakening of the part, as has been mentioned the chief danger in the involvement of the pulmonary vessels is infarcts followed by abscess of lung. In the cerebral vessels apoplexy occurs, and is usually fatal.

*Treatment:* This varies as to the part affected and the cause producing the Thrombus. In the extremities, absolute rest with elevation of the parts, use of ice-bags early and hot water bottles later, applied to the affected limb. Internally, reconstructive tonics where anemia exists, and free elimination will prove most valuable.

#### CORONARY THROMBOSIS

Thrombosis of the Coronary vessels is comparatively much rarer than that of the extremities, though not an infrequent result of emboli, or the production of the thrombus may be due to abnormalities within the vessel walls of the heart itself.

*Etiology:* This is practically the same as that given above. Namely, contagious diseases, Typhoid Fever, fracture of long bones, surgical operations, etc. Here the Anemia probably play a more important part, than where thrombi occur in other parts, due to

the greater deposit of fibrin in these vessels. Any inflammation, such as an endocarditis or an endarteritis affecting the coronary vessels may be the sole causative factor in the production of a thrombus in this locality. Vegetations or clots on the Aortic Valves may also be responsible for this condition. The interventricular branch of the left Coronary Artery is the most frequent seat of Thrombosis, so that infarction which usually follows Thrombosis here, is most often situated in the interior wall of the left ventricle and the lower portion of the interventricular septum.

*Pathology:* The formation of the clot here is not unlike that formed in other vessels. All the varieties of thrombi are found though the so-called white thrombi probably predominate.

*Symptoms:* The blocking of one main trunk of the Coronary Artery may cause sudden death, though this is not always the case. The onset may be sudden, severe and devastating, but following the development of collateral circulation the symptoms gradually clear up and the heart returns to normal; with the onset there is sudden severe pain, either in the precordium or epigastrium. This pain may radiate to the shoulder or down one or both arms. It is persistent and continuous, relief seems impossible, and there is great dyspnea. Even under moderately large doses of opiates the pain and shortness of breath may last for hours. On examination the severity of the symptoms seem out of proportion to the physical findings. The skin is moist and ashen in color, the face has an anxious expression, nausea and occasionally vomiting is noted. In the lungs there may be fine crackling rales at the bases or there may be rales scattered extensively over the whole lung. The heart is moderately enlarged, the sounds are weak, and the apex beat is often absent. The pulse may be regular, though often it is markedly irregular, due to premature beats or more rarely to heart block. Tachycardia is usually present; a count of one hundred and fifty to the minute is not uncommon. Due to Cardiac weakness, many of the heart beats may not be noted, either at the pulse or even with the Stethoscope and only the Cardiograph can give an accurate picture of the heart function.

*Prognosis:* This is extremely grave. While not of necessity fatal, due to the presence in most of these cases of Arterio-Sclerosis, the prognosis should be very guarded. Where the onset is sudden and severe with marked prostration most cases will die.

*Treatment:* This should be directed towards the relief of pain and support of the patient.

In many of these cases opiates will be necessary. Morphine has in my hands proven most valuable either alone or in combination with atrophine. Occasionally excessive doses will be required to give even a reasonable amount of relief. Ice-bags over the heart. Absolute rest, both physical and mental, are of vital importance in every case.

### CHLORIN GAS IN RESPIRATORY DISEASES\*

JOSEPH C. MACDONALD, M.D.  
OKLAHOMA CITY

Considerable has been written during the past year concerning investigations of the effect of Chlorin Gas on certain respiratory diseases.

These investigations were prompted by the observations of the army officers, that during the influenza epidemic the men at the front were much more free of the disease than those stationed further in the rear. This apparent immunity was attributed to the chlorin gas to which the men were exposed.

It was also observed that among the men working in the chlorin plant at Edgewood Arsenal there was not a case of influenza, while other organizations in the arsenal suffered alike from the disease.

Chlorin gas has been used at times during the past century, Harry L. Gilchrist<sup>(1)</sup> stating that in 1824, William Wallace of Dublin recommended its trial in diseases of every kind. Hale used chlorin at the University of Arkansas during the influenza epidemic and believed the students receiving the treatments were benefitted. Edward B. Vedder and Harold P. Sawyer<sup>(2)</sup> of the Army Medical Corps experimented and found the concentration of chlorin required to kill bacteria on exposed agar plates. This concentration they found to be 0.021 m. g. of chlorin per liter of air which is within the limits of safety but is rather irritating to most patients. They used 0.015 m. g. of chlorin per liter of air in most of their treatments and found this strength to be satisfactory.

Our experience with chlorin has been chiefly in the acute infections of the respiratory tract although we have treated a number of chronic cases. Tuberculous, asthmatic and hay fever cases were not treated as it has been found by others to be of no benefit and in some instances the condition was made worse.

In treating the acute rhinitis cases adrenalin was first applied to shrink the tissues

of the nose so that the chlorin would have better access to the nasal cavities. There was usually an increase in the nasal secretions during the treatment due to the irritation of the chlorin. Soon after the treatment the secretion became less and the congestion of the nose was relieved to a degree. In the cases seen within the first twenty-four hours, one treatment was usually sufficient to abort the cold.

The huskiness of the voice in the acute laryngitis cases was often noticeably improved before the patient left the treatment room.

Acute bronchitis cases also responded well to this treatment, a number of cases reporting they had slept well the night following the treatment, the first good nights rest they had been able to get for several nights.

In the chronic cases, treatment as a rule was not of much benefit.

The treatments were for a period of one hour and when more than one treatment was given, the best results were obtained by giving them on succeeding days.

A concentration of approximately 0.015 m. g. of chlorin per liter of air was used. A stronger concentration often causing considerable irritation of the nose and throat, coughing being one of the chief symptoms of too much chlorin.

The apparatus used by us is one of the standard makes. It measures from the cylinder by a displacement of water from an inverted tube, each displacement being called a pulsation. To continue the concentration at approximately 0.015 m. g. one pulsation of gas was liberated every fifteen minutes.

An improvement<sup>(3)</sup> over this apparatus is one which generates chlorin by the electrolysis of hydrochloric acid, the rate of generation being controlled by regulating the flow of the current through the electrolyte. A small motor in the box drives a blower which delivers the chlorin impregnated air at a certain number of cubic feet per minute. The patient breathes this air from a funnel shaped bag which is placed loosely over the nose and mouth. Treatment with this type of instrument is more satisfactory because a constant concentration of chlorin gas can be maintained. With the apparatus we used one had to observe carefully to keep the concentration at the approximate strength desired and if the gas was not strong enough the desired results were not obtained.

There is one particular advantage to the instrument we used in that more than one or

\* Chairman's Address read before the Section on Eye, Ear, Nose and Throat, Annual Meeting Oklahoma State Medical Association, Tulsa, Mo., Dec. 12, 13, 14, 1927



tient could be given treatment at the same time.

The acute respiratory infections are usually self limiting so one cannot jump to conclusions at the apparent good results obtained with chlorin treatments. We feel, however, that the results are better than those obtained by the usual treatments for these conditions.

The patients in many instances were well pleased with the relief obtained.

We did not treat any pertussis or influenza cases, but the experience of others has been that it is beneficial in many of these cases.

Experiments have shown that while mucous membrane of the respiratory tract was not made sterile, there was an apparent diminution in the bacterial growth after a treatment of one hour.

It is possible that in chlorin we have a remedy which will prevent in a future influenza epidemic the enormous loss of life which the recent epidemic caused.

In conclusion from our limited experience we believe that this treatment is a distinct advance over our former method of handling these cases.

(1) Wisconsin Medical Journal—October, 1924.

(2) Journal American Medical Association, March 8, 1924.

(3) Vedder and Sawyer, Jr. Amer. Med. Ass'n, Jan. 21, 1925.

## INTRACRANIAL HEMORRHAGE IN THE NEW-BORN\*

CARROLL M. POUNDERS, M. D.  
OKLAHOMA CITY

In all probability, the one single factor that is responsible for the greatest mortality and morbidity rate in the new-born baby is hemorrhage inside the cranium. Recent investigations have shown that such a condition is surprisingly frequent. To say that one-third of all the deaths during the first week of life are due to this factor is putting it conservatively, I believe. And when we reflect on the large number of cases of spastic paralysis or Little's disease seen in the clinics and hospitals over the country we at once realize what a tremendous morbidity rate results from it. Some degree of hemorrhage has been found in as high as ten per cent of all cases delivered in one institution. This was determined by the finding of blood in the spinal fluid in doing routine spinal punctures. When we note how seldom intracranial hemorrhage appears on death certificates as a cause of death in the new-born, we must

conclude that it is a condition that is quite commonly overlooked.

*Etiology:* From a causative standpoint these cases may be divided into four classes

1. Those due to trauma.
2. Those resulting from the so-called hemorrhagic diseases of the new-born.
3. Those due to asphyxia.
4. Those due to prematurity.

The *Traumatic Cases* are probably more apparent and more easily diagnosed than the others. During the second stage of labor the head may be traumatized or crushed sufficiently to cause a fracture or an excessive overriding of the bones along the suture lines. An entire bone may be greatly depressed. It is not difficult to see how this might result in the tearing of the meningeal membranes below, with the rupture of a vessel and a resulting hemorrhage. These cases are seen more commonly in primiparæ and are slightly more common in male children. The latter fact is due to the size of the male head averaging a little more than that of the female. It commonly results from long, dry, tedious labors, the administration of pituitrin and the application of forceps.

In cases due to the *Hemorrhagic Diseases of the New-born* the process is just part of the general hemorrhagic tendency. There may or may not be hemorrhage elsewhere—under the skin, from the mucous membranes, etc.

There is some question as to just what part *Asphyxia* might play in causing intracranial hemorrhage. It is quite generally accepted that it causes an increase in the cerebral venous pressure. It would not be difficult for this to reach the extent of causing a ruptured vessel and bleeding. It probably occurs most often in cases of breech delivery, where there is trouble in delivering the after-coming head. However, we must conclude that trauma is a big factor also.

Just how important *Prematurity* is as an etiological factor it is difficult to estimate. It is thought by some to play quite an important part. In a premature baby the blood vessels are not well developed, being much more friable and easily torn than in the full term. The bones are more widely separated at the sutures and excessive overlapping results more easily. Especially is this apt to occur in a precipitate birth.

Depending upon the location of the hemorrhage, we can, in a general way, divide these cases into two classes: (1) The supratentorial—where the hemorrhage is all above the tentorium cerebelli; and (2) the subtentorial, where the hemorrhage is entirely below the tentorium cerebelli. Naturally in

\*Chairman's Address; read before the Section on Obstetrics and Pediatrics, Annual Meeting Oklahoma State Medical Association, Tulsa, May 12, 13, 14, 1925.

massive hemorrhages these types cannot always be clearly separated.

*Symptomatology and diagnosis:* In thinking along the lines of symptomatology and diagnosis there is one principle that we must bear in mind—whatever symptoms may be present, they are due to the increased intracranial pressure that results from the hemorrhage. The actual loss of blood is a very minor factor. It is the injury to the central nervous system from the increased pressure that causes the symptoms, results in death or leaves a permanently disabled child. Another thing we must bear in mind is this: In adults intracranial lesions present rather uniform groups of physical signs and symptoms, depending on their location and extent. They can be fairly accurately localized by studying these signs. The nervous system of the new born child is undeveloped in many ways. Certain tracts scarcely function at all for some few months after birth. Naturally, if we look for a train of neurological phenomena similar to that seen in adults we shall be confused. From a clinical standpoint we must depend upon signs and symptoms that are rather general and, at times, more or less vague. One way of classifying them is to divide them into (1) those with massive hemorrhage and (2) those with slow hemorrhage. They are distinguished chiefly by the time of the onset and the severity of the symptoms. The massive hemorrhage results from the rupture of one of the sinuses or of one of the larger veins emptying into these. There results an immediate excessive increase in pressure with its train of symptoms. These, naturally, come on early. These babies are often hard to resuscitate. They may be quite cyanotic, show spasticity, breathe with difficulty and go to the bad, so to speak, quite early. The slow hemorrhage type results from a tearing of the meninges with a rupture of one of the smaller vessels. Such a baby may seem perfectly normal at birth and show no symptoms for a few days. Then it begins to refuse to nurse, becomes drowsy and listless, shows cyanosis and perhaps has convulsions. You hear of a number of fine, large babies, who seemed almost perfect at birth, got along fine for two or three days and then went to the bad. You will hear all kinds of reasons, except the correct one, given for this condition. It is not uncommon for such a baby to be taken from the breast, under the erroneous impression that the mother's milk does not agree with the baby.

The particular train of symptoms that presents itself depends largely upon the location of the hemorrhage itself: i.e. whether it is supratentorial or subtentorial. When it is

above the tentorium we practically always get a tense or bulging fontanel. Spasticity may be present and the reflexes exaggerated. Convulsions nearly always occur. Cyanosis is not common and the pulse and respiration are not apt to be disturbed. At times ocular symptoms are seen and paralysis of certain spinal or facial nerves. Where the hemorrhage occurs below the tentorium the symptoms result from pressure about the pons and medulla. The most constant symptom here is cyanosis. These cases are nearly all cyanotic. I believe that a large number of these cases are erroneously diagnosed as cases with congenital heart lesions. Of the two conditions, undoubtedly, hemorrhage is by far the most common. The fontanel is not apt to be bulging until later. As a rule, convulsions are not seen early. Spasticity and exaggerated reflexes may or may not be present. The respirations are very irregular and the pulse may be slow. In many cases the child cries out almost continuously as if in pain. Of course, in a very extensive hemorrhage the pressure will be transmitted to all parts of the cranium and there will be no clear distinction between the two types.

The most valuable, single means of arriving at a diagnosis is by means of the spinal puncture. In the subtentorial type of hemorrhage this settles the diagnosis at once. The spinal fluid is usually found to be under increased pressure and always contains blood. It often seems to be composed of practically pure blood. If the hemorrhage be located above the tentorium, there will usually be increased pressure, but not always blood. As to whether or not blood is present depends, of course, upon the extent of the hemorrhage. If very extensive, there is quite apt to be some blood present, regardless of the location. This may have the appearance of being old and under the microscope the cells may be crenated. Spinal puncture is a fairly safe and simple procedure in infants and should be done without delay where there is any reason to suspect hemorrhage.

Another most valuable procedure is to determine the bleeding time and coagulation time. Cases giving a history or showing evidence of marked trauma may not be so difficult to diagnose. But some of the cases resulting from the hemorrhagic diseases of the newborn, may be more or less vague and difficult. There may be nothing in the history that would lead one to suspect a hemorrhage. The normal bleeding time is from three to five minutes and the normal coagulation time is from five to nine minutes. Any case that exceeds these limits should be suspected of being a case of hemorrhagic disease and treated as such. The technique of mak-



ing these tests is quite simple and need not be gone into here. Many of the maternity hospitals now do routine coagulation tests on all infants.

*Prognosis:* It is rather difficult to discuss the prognosis of intracranial hemorrhage. It depends so much upon the promptness of the diagnosis and the management. Untreated, the mortality is high—just how high has never been determined. Of those that survive, no doubt, a high per cent. are subnormal mentally or permanently disabled by a spastic paralysis. If recognized early and properly handled, in all probability, a great number of them can be saved.

*Management:* Like any other case of hemorrhage and shock, these cases should be kept very quiet. They should be moved and handled just as little as possible. The usual method of clothing them may be dispensed with. They should be wrapped in blankets and kept warm. An ice cap may be put to the head with several layers of a thick towel intervening. Where the symptoms are marked or the baby is very weak the milk should be expressed from the breast and given by means of a medicine dropper or gavage. The pressure should be relieved by spinal puncture. This can be repeated every eight hours, if necessary. In a great many cases this treatment will suffice. The damage from pressure must be prevented until the hemorrhage is absorbed. In marked hemorrhage above the tentorium spinal puncture may not afford a great deal of relief. Here it may be necessary to do a ventricular puncture or even a decompression operation. We must keep one thing in mind—if the baby is to be saved the pressure must be relieved before irreparable damage is done.

When we are dealing with the hemorrhagic conditions of the newborn, as shown by a prolonged bleeding and coagulation time, there is nothing so effective as injections of whole blood. This is usually taken from the father and injected at once, subcutaneously, in amounts varying from 10 to 30 c.c. This can be repeated every eight hours until the coagulation time has reached the normal limit.

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## SURGERY OF THE PROSTATE\*

L. A. HAHN, M. D.  
GUTHRIE

One of most interesting and unique chapters in the history of surgery is the development of Prostatic Surgery, in the last twenty-five years.

It was left to Freyer, in 1901 to be the first to enucleate the gland from its capsule through the superpubic incision, and to him belongs the credit of being the first to enucleate the entire organ by this method.

Even in Surgery we find some of the most ludicrous claims, even by men who have been pioneers in surgery, and men who have done much to advance this science. In 1902 I heard one of our leading surgeons, one who had gained sufficient prominence to affix his name to one of our common operations, vehemently express the opinion that the prostate could not be removed in the manner suggested by Freyer, as the procedure was anatomically impossible.

This merely illustrates that surgical progress proceeds, like everything else, with opposition. It was the contention of these opponents that the surgeon who presumed to remove the prostate was merely enucleating a neoplasm. However, the development for the next few years was very rapid, as more than one-half of men past sixty years of age are more or less troubled with disease of the prostate. This opened a new field of activity for the surgeon and for the next decade prostates were removed by the wholesale. But the high mortality following this operation had the effect of checking the enthusiasm of the surgeon.

This created a great deal of discussion as to what was really the cause of the high mortality. Being a disease of old age, many of the patients having cardiovascular disturbance, and many other deficiencies that usually exist at this time of life, was one of the factors causing the mortality. But the principal one was the residual infected urine.

Prostatectomy by the perineal route was developed some ten years earlier and followed closely on the practice of perineal prostatotomy. But antedating this, castration was widely and very indiscriminately employed in the treatment of prostatic enlargement. However, unsexing men never became very popular, even old men rebel at this mutilating operation, and in many cases it developed mania. Aside from this the mortality was

\* Chairman's Address; read before the Section on Surgery and Gynecology, Annual Meeting Oklahoma State Medical Association, Tulsa, May 12, 13, 14, 1925.

high being something like 20 to 25 per cent and the result as to improvement was unsatisfactory.

The only excuse for this operation was theoretical, removal of the testicles would reduce the size of the prostate by atrophy. But the operation fell into disuse as it deserved.

For patients who are not able to endure the radical removal of their diseased organ there is left only one palliative measure, which is the permanent catheter or the superpubic urinary fistula, which I have employed a number of times.

While for the others the superpubic or perineal prostatectomy offers the safest cure.

I have not a large series of cases from which I have made special deductions nor have I anything original to offer in technique. But I do wish to make a plea for the usefulness of both routes of attack.

There has been in the last few years quite a division of opinion as to which is the best method to approach the prostate.

Dillon of San Francisco, says that after a very large series of cases, he has adopted the perineal route as routine. And other surgeons of equal prominence argue that the superpubic route is better. To my mind the superpubic route is the more simple method and easiest of accomplishment but there are certain selected cases in which the patient would profit very largely if the perineal route were chosen. So there is no question in my mind that the surgeon who essays to do prostatectomy should be skilled in either route.

I will admit most of my cases have been by the superpubic route and as Thomas has said "it is more fool proof than the other method."

There are a number of pitfalls in a perineal prostatectomy. Such as rectovesical fistula and other troublesome complications, but these factors should never influence the determination of the route of approach.

As to anesthesia, that has been another much discussed point, of late, in this operation.

In my experience I have used local anesthesia and ether and I have never encountered the bad results reported by some of the men, who seem to think that spinal anesthesia or gas oxygen are the only safe methods by which the prostate can be removed.

I also wish to make a plea for early operation in prostatic troubles. Our greatest danger, as has been pointed out is in the residual urine. This is allowed to back up in the ureters into the kidneys producing renal involvement that renders the case inoperable.

If we could have the patients early so that we could get our cystoscopic picture determining early if cancer is present, it would reduce our mortality rate considerably.

In a report of one urologist, at the last meeting of the A. M. A., he said that prostatectomy in the hands of the general surgeon had a mortality rate of about 30 per cent against a rate of two to six per cent. in the hands of the specialist. Now, if this is true, it is a terrible indictment against the general surgeon.

My belief is that we can reduce the mortality, whatever per cent it may be, by educating the laity to seek surgical assistance early, such as we have been doing for the last two decades in relation to appendicitis.

Retention of urine or at least a partial retention, with dribbling, is usually the first symptom that forces a patient to seek relief. If we could at this time make a cystoscopic examination and determine whether it is a cancer or a benign hypertrophy, this would give the cancer patient a better chance of recovery. For there is no doubt in my mind if we could get these early and treat the growth with radium before operation, we would be able to save more of them, as cancer comprises about 20 per cent of these cases. Radium applied to a malignant growth of the prostate prior to operation will have a greater usefulness than radium applied to the field after operation. The cystoscope would reveal a diverticulum, calculi and other neoplasms that might be present.

In the advanced cases of benign hypertrophy, where there is considerable of residual urine and in some cases so badly infected that it amounts to a quantity of retained pus, there can be no doubt as to the advisability of cleaning up the bladder, prior to operation.

This might be accomplished by constant irrigation through a catheter or through a superpubic cystostomy. In fact, I have done the cystostomy in all my cases. I think it is conceded by most surgeons who do the operation frequently, that the two stage operation yields the best results.

Another point in technique is the suture of the capsule after the removal of the gland, altho I have never had any alarming hemorrhage, it seems to me that this is a refinement of technique.

So, in summing up, I would say that both routes of prostatectomy are very useful and advantageous in particular cases. The condition of the patient should be the factor that determines the method.

Now, in the matter of anesthesia, the patient's welfare must always be paramount and



the surgeon who obtains the best results from spinal anesthesia, ought to use that form, while others who use local or gas oxygen or ether, might find it best to use one of these.

All surgeons are agreed that cancer operated on early, anywhere in the body, gives the best results and cancer of the prostate is no exception to this rule.

## SOME ACHIEVEMENTS OF MODERN UROLOGY\*

E. LEDLEY COHENOUR, M. D.

TULSA

During the last twenty-five years the practice of medicine has undergone greater changes than have characterized any previous period, and, while much progress has been made in all branches of medicine, none have advanced by leaps and bounds as has Urology. This advancement has been made possible through the development and perfection of the cystoscope and other instruments of precision, and is due in a large measure to the untiring efforts of leaders in this special branch, who through clinical experience and research have threshed out many of the urological problems, and have handed down the ways and means of correctly diagnosing and treating them.

Caulk has quite correctly alluded to Roentgenology and Urology as the Siamese Twins of medicine; for many urological conditions, particularly those of the upper urinary tract are not possible of diagnosis without the aid of the X-Ray. Therefore, Roentgenology has played no small part in the advancement of modern Urology.

Investigations in the field of Urology have already given much to the general profession. Pathological elements in the urine have been traced to lesions in the bladder, ureter or kidneys, by cystoscopy, ureter catheterization and uretero-pyelography. Renal function tests, either giving the combined renal value or the comparative value of the kidneys by ureter catheterization have become primary diagnostic procedures. Blood chemistry combined with these function tests has made possible a great advance in accurately establishing the degree of kidney damage.

The normal kidney has the function of eliminating bacteria, just as it has for taking nitrogenous waste products from the blood stream, but given a kidney with a lowered resistance, either from some defect within itself, or from an obstruction at some level

within the urinary tract, and we have a resulting nitrogen retention, plus kidney infection, if there is a focus of infection within the body. Thus, it is an accepted fact that kidney infection is usually secondary to some distant focus of infection and is rarely primary within the kidney itself.

The urgent demand for a satisfactory urinary antiseptic has led to much research and experimental work, during recent years in a number of our larger clinics, with the result that a number of urinary antiseptics have been brought out. Among these, two are especially worthy of mention, viz: (1) Mercurochrome 220 soluble and (2) Hexyl resorcinol—

1. Mercurochrome as brought out in Dr. Hugh Young's clinic at Johns Hopkins Hospital enjoyed an extensive use at first as a topical application in the genito-urinary tract; however, more recently it has also been used quite extensively in the field of surgery as a useful antiseptic, and has been administered intravenously with much success in cases of pyelitis and in general infections and bacteremias.

2. Hexyl resorcinol, brought out by Dr. Veador Leonard, of Baltimore in the past few months as an ideal internal urinary antiseptic, seems to possess all the necessary qualifications as such. Dr. Leonard states that this new drug is chemically stable, non-toxic in therapeutic doses, non-irritating to the urinary tract, bactericidal in high dilution in urine of any reaction and is excreted by the kidney unchanged in sufficient percentage to impart active bactericidal properties to the urine. Furthermore it is administrable by mouth, secreted in the urine at a rate which admits of continuous local action in the urinary tract, and, finally, the urine secreted possesses a destructive action against organisms exposed to it, rather than mere growth inhibiting properties. He furthermore states that in the use of this new drug, he is justified in claiming that the infections of the urinary tract due to the staphylococcus albus and aureus, the streptococcus, and some strains of B. Pyocyaneus, there is a prompt and complete disinfection of the urinary tract with resultant clearing of the urine and disappearance of symptoms; and, that B. Coli infections of the urinary tract are cleared up completely by persistent treatment over long periods of time. In his case reports we found that no special requirements as to diet were necessary, but that the drug should be administered directly after meals, as it has a tendency in some cases to cause slight gastric disturbances at first. The administration of sodium bicarbonate is con-

\* Chairman's Address; read before the Section on Genito-Urinary, Dermatology and Radiology, Annual Meeting Oklahoma State Medical Association, Tulsa, May 12, 13, 14, 1925.

tra-indicated when hexyl-resorcinol is being used.

If the claims made by Dr. Leonard are substantiated after more evidence is gained by further clinical experience, then, we have, in hexyl-resorcinol, a drug that will fill a long felt need as an internal urinary antiseptic.

In conclusion, I should like to say that I have just mentioned a few of many achievements of modern Urology, but enough to show that much has been accomplished; that much work is being done in this special field, and that Urology, the youngest specialty, is rapidly assuming an important position in the field of medicine.

L. Leonard, Vendor: Secretion of Bactericidal Urine and Disinfection of the Urinary Tract following Oral Administration of Certain Alkyl Derivatives of Resorcinol, Journal A. M. A. Dec. 20th, 1924.

### THE GORGAS MEMORIAL\*

FRANKLIN MARTIN, M.D.

Chairman of the Board Gorgas Memorial Institute.

CHICAGO

Since the last meeting of your Society the Gorgas program has evidenced a steady, healthful growth. Fifteen hundred well known doctors and influential laymen and women are now actively participating as State Governing Committee members in developing the movement. As you know, the Gorgas Memorial consists of two phases: first, research in tropical medicine; and second, a "personal" health educational campaign.

#### THE RESEARCH PROGRAM

Last September, the Republic of Panama authorized the floating of a \$750,000 bond issue to finance the construction of the Institute which will be erected on a site of land donated by the Panaman Government; \$10,000 worth of material is now available for use when a sufficient sum has been realized from the Endowment Fund to finance the research teams. In addition a drive to raise \$10,000 towards the Endowment Fund is now under way in Panama and the Canal Zone. In other words, the Republic of Panama, in recognition of Gorgas' great work in that country, is evidencing its appreciation by making this very substantial contribution to the Memorial in his honor. No part of the funds raised in the United States will be used for building or equipment as this is being provided for in the manner outlined above. Our only obligation is to maintain the build-

ing when it is built and finance the research workers.

#### THE "PERSONAL" HEALTH CAMPAIGN

Public health activities are adequately provided for in practically every state. But "Personal" health depends upon the individual. Many diseases that are incurable in later life might have been checked if discovered in their incipency. Many diseases are caused by faulty habits and might logically be termed "habit" diseases. This is the group that the Gorgas Memorial hopes to reduce by urging upon the individual the importance of keeping in close contact with his family doctor, consulting him frequently for advice in order to keep well and having a periodic health examination for the purpose of detecting physical defects and remedying them before they progress to the incurable stage.

The "personal" health campaign was begun in a modest way in January of this year. Twelve signed health articles prepared by doctors of national reputation (members of our State Governing Committees) have been distributed to 1,000 newspapers and the various press associations. A series of twelve radio talks has been broadcasted by State Governing Committee members from the principal radio stations of the United States. Arrangements have been made with several radio directors for the broadcasting of Gorgas' health talks weekly.

In these articles and talks, the point is driven home to the reader or "listener-in" that his family physician should be regarded as the custodian of his physical well being and that the scientific medical profession is the real authority in all matters pertaining to health.

It gives us great pleasure to report that the response from newspaper editors and radio directors has been most cordial. Every article we have issued has been published and scores of editorials commenting favorably on this movement of doctors and laymen to make life healthier and longer by developing co-operation between the public and the scientific medical profession, have been received at headquarters. In this connection, the following quotation from the Detroit Saturday Night, a lay weekly, is pertinent as it is typical of editorial comments received from all sections of the country.

"Quacks and quackery will receive a heavy blow when the Gorgas Memorial Institute, recently founded in honor of the great army medical man who showed the world that yellow fever and other pestilences could be conquered by preventive methods, gets functioning. The Institute is not heralding as one of its

\* Read before Oklahoma State Medical Association, Annual Meeting, Tulsa, May 12, 13, 14, 1925.



purposes the counteracting of propaganda such as is spread by Bernarr MacFadden and others of his kind who use every opportunity to attack the medical profession, but just so far as its plans, as announced are successful, *it will help to overcome pernicious teachings and ignorance regarding health.*"

#### THE GORGAS MEMORIAL

To summarize, we feel that the Gorgas program has passed the experimental stage. The public is willing and anxious to be guided in matters of health by the real authority—the scientific medical profession. But the representative men in the profession must accept the responsibility their position places upon them. Public ignorance is encouraged by professional reticence. Every high minded doctor abhors self aggrandizement and blatant self-advertising. But the public is entitled to proper health information furnished them in a conservative, ethical way from authoritative sources. This cannot be done by the individual physician. The Gorgas Memorial is the channel through which it can be done. To make it 100% effective, we must have the support of every doctor.

In the very near future, intensive organization of the Oklahoma Gorgas Memorial Governing Board will begin. Your state should be adequately represented in order that the permanent activities of the Gorgas Memorial which will be supervised by the State Governing Board may be properly cared for. We sincerely trust that Oklahoma will play an active and influential part in the full development of the Gorgas Memorial.

#### SIGNIFICANCE OF THE COLLOIDAL PROPERTIES OF GELATIN IN SPECIAL DIETARIES

THOMAS B. DOWNEY, PH. D.  
PITTSBURGH, PA.

Senior Industrial Fellow, Mellon Institute of Industrial Research, University of Pittsburgh, Pittsburgh, Pa.

An examination of the dietetic possibilities of gelatin from a chemico-physiological standpoint reveals a number of properties which should make this unique food product a valuable addition to special dietaries, particularly those in which milk forms the sole or major portion. In such dietaries gelatin functions as a protein food to the extent of the utilization of its amino acids by the body and in addition possesses marked activity as a protective colloid and emulsifying agent. Practical observations in clinics and hospitals as well as experimental work in laboratories indicate that these characteristic properties of

gelatine as a colloidal substance exert a most significant influence in promoting digestion and absorption of certain types of food.

The importance of this colloidal activity of gelatine where fed in conjunction with dairy products has been demonstrated by the writer in feeding tests with the albino rat. Shortly after weaning, the young from several litters were divided into two groups; one group received pasteurized whole milk as its sole diet, the other pasteurized whole milk containing one per cent. of gelatine. Observations extending over a period of six months showed that the growth and physical well being of the group fed on gelatinated milk was markedly superior to animals fed on the plain milk diet. The increased growth was accomplished on smaller food consumption. In fact, during the early growth period for equivalent gains in body weight the animals on gelatinated milk consumed about 23 per cent. less food than the group on plain milk.

Another striking illustration is found in the writer's experience with ice cream. Over a period of seven weeks it was observed that a group of rats fed on an exclusive diet of ice cream containing one per cent. of gelatine gained no less than 25 per cent. more in body weight than was the case with their brothers and sisters whose diet was plain ice cream. For equivalent gains in body weight the food consumption of the group fed on gelatine-containing ice cream were much less. Smaller percentages of gelatine resulted in proportionate improvements. It is important to note in this connection that the better nutritional status of the gelatine ice cream group after a number of months on the diet was reflected in continued health and growth, and increased bone development and reproduction in several cases.

It should not be presumed that the observed improvements of the dairy products are due entirely to the added protein value of the gelatine but possibly more to the protective colloidal and emulsifying effects that it confers. The digestive processes are essentially colloidal phenomena, whereby fats, carbohydrates, and proteins are ingested in the colloidal conditions and changed by the various enzymes to degradation products capable of absorption by the body. To accomplish the formation of these simpler substances, the enzymes must come into intimate contact with the food particles. If, perchance, the food particles are present as large tough masses, as is the case with cow's milk coagulating under the influence of the hydrochloric acid and rennin in the human stomach, the contact surface of the enzymes with the food is limited and gastric digestion is delayed or impaired. Various specialists have described experi-

ments in vitro as well as with humans which show that the coagulation of cow's milk by acid and rennin is prevented or modified in character in the presence of relatively small amounts of gelatine. This effect is spoken of as protective colloidal action and it is interesting to note that gelatine is one of the most efficient of all known protective agents. Gelatine is also a good emulsifying agent and it is quite probable that it aids the secretions of the alimentary apparatus in the emulsification of fats.

In discussing the digestibility of milks Chapin says that those animals whose stomachs form the larger percentage of the digestive tract and their digestion is largely gastric produce milks that form tough curds, as for example, the cow. In contrast is the human whose stomach forms only about 20 per cent. of the digestive tract. Human milk curdles in light flocculent masses. It has been pointed out by Alexander that human milk contains a natural protective protein in large amount, which is present in small amount in cow's milk. It would seem, that the addition of such a protective agent as gelatine to cow's milk would make it particularly suitable for infants, and such has been found to be the case, as is testified to in pediatric literature.

In like manner, gelatine has been shown to be of value in other dietaries composed largely of dairy products. For example, Hawk reports that the addition of gelatine to the milk-egg diets of tuberculosis patients resulted in decided nutritional improvements with the majority of the cases tried.

The experiments described suggest the advantages that are to be derived by the utilization of gelatine in other dietaries. The protective colloidal and emulsifying action of gelatine promotes the digestion and absorption of various types of foods. It is also misleading to assume that gelatine as a protein is of insignificant food value.

Feeding tests by McCollum and by Osborne and Mendel have shown that with certain cereal grains gelatine is exceptionally well utilized, presumably through its high content of the amino acid lysine. Also, with milk proteins gelatine is of value, as has been found by Sure. In combination with milk in the liquid form, it is believed, however, that the colloidal properties are of greater significance.

1. See, for example: Jacobi, "Industrial Diseases of Infancy and Childhood," 1887, p. 79; Starr and Westcott, "Diseases of Children," 1900, 23; Griffith, "The Care of the Baby," 1908, 386; and Friedenwald and Ruhrah, "Diet in Health and Disease," 1923, 295, 466. On the utility of gelatine in chronic intestinal infection, see Herter, "Infantilism from Chronic Intestinal Infection," 1908, 101.

## BOOK REVIEWS

**WEBSTER'S NEW INTERNATIONAL DICTIONARY**—The Merriam-Webster Regular Edition, buff buckram binding, indexed, 407,000 words, 2,700 pages, 6,000 illustrations, price \$16.00 net; The G. & C. Merriam Company. Publishers. Springfield, Mass.

Dictionaries come and go, but Webster's seems to be with us always, a new edition just issued containing many new words in an addenda of thirty-three pages, with such words as broadcast, realtor, fascista, novocaine, junior college, Esthonia, bloc, trade acceptance, overhead, vitamin, etc., etc. The World War has changed the spelling of geographical names in Europe—all such changes are given in the complete revision of the Gazetteer in Webster's New International, as well as the official census statistics from all over the world. A book well worthy of a prominent place in any professional man's office.

**PRACTICAL MEDICINE SERIES, 1924 VOLUME V. Gynecology** Edited by Joseph B. DeLee, A. M., M. D., Professor of Obstetrics, Northwestern University Medical School; Attending Obstetrician, Chicago Lying-in and Mercy Hospitals; Consulting Obstetrician, Provident and Evanston Hospitals, with the collaboration of J. P. Greenhill, B. S., M. D., Adjunct Attending Obstetrician, Chicago Lying-in Hospital and Dispensary; Instructor in Obstetrics, Northwestern University Medical School, Cloth, illustrated, 534 pages, price \$2.00. The Year Book Publishers, 304 South Dearborn St. Chicago.

**PRACTICAL MEDICINE SERIES, 1924. Pediatrics.** Edited by Isaac A. Abt, M.D., Professor of pediatrics, Northwestern University Medical School, Attending Physician Michael Reese Hospital, with collaboration of Johanna Heumann, M.D. Illustrated, cloth, 380 pages, Price \$2.00. The Year Book Publishers, 304 South Dearborn St., Chicago.

For twenty years this phase of medicine has been combined in the series issued annually with the subject of orthopedics. The separation of the subjects and placing it in the hands of such well known authority as Dr. Abt bespeaks its success in advance. The illustrations in this issue are all original and new, and of unusual subjects. The volume is a review of the newer things in pediatrics for the past year.

## ABSTRACT DEPARTMENTS

*will appear again beginning with the July JOURNAL.*



# THE JOURNAL

OF THE

## Oklahoma State Medical Association

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DR. CLAUDE A. THOMPSON.....Editor-in-Chief  
308 Barnes Building, Muskogee, Okla.

DR. P. P. NESBITT.....Associate Editor  
814 Surety Building, Muskogee, Okla.

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cation of the editor, 308 Barnes Building, Muskogee, Oklahoma.

Local news of possible interest to the medical profession  
notes on removals, changes in address, deaths and weddings will  
be gratefully received.

Advertising of articles, drugs or compounds unapproved by the  
Council on Pharmacy of the A. M. A., will not be accepted.

Advertising rates will be supplied on application. It is sug-  
gested that wherever possible members of the State Association  
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### EDITORIAL

TRANSACTIONS OF THE THIRTY-  
THIRD ANNUAL MEETING, OKLAHOMA  
STATE MEDICAL ASSOCIATION, Tulsa, May 12,  
13, 14, 1925.

HOUSE OF DELEGATES—May 12, 11:00 A. M.  
Call to order by the President Dr. E. S.  
Lain.

Minutes of the last meeting as published in  
the JOURNAL of June, 1924, adopted.

The following committees were appointed:

Auditing—Drs. Risser, Wall and Bungardt;  
Credentials—Drs. Cook, Shuler and Howard;  
Necrology—Drs. Mayginnis, Risser and D.  
Long; Resolutions—Drs. Rogers, Terrell and  
Ross D. Long.

The Secretary-Treasurer-Editor presented  
his report to the House. (See report in July  
JOURNAL).

The Committee on Medical Defense report-  
ed verbally by its Chairman, Dr. L. S. Wil-  
lour. The committee recommended that the  
sum of \$100.00 as decided upon at the Okla-  
homa City meeting, May, 1924, be the limit  
of attorneys' fees allowed in case of alleged  
malpractice suits against members. Report  
adopted.

Committee on Hospitals (See report JULY  
JOURNAL)

Health Problems in Education (See report  
JULY JOURNAL).

Committee on Exhibits, reported verbally  
by Drs. Walter Bradford and C. A. Thomp-  
son, report adopted.

Committee on Medical Education, (report  
adopted) (See report JULY JOURNAL.)

Reports of Delegates to the American  
Medical Association were read by Drs. W.  
Albert Cook and McLain Rogers, Reports  
adopted. (See reports JULY JOURNAL).

Committee on Revision of Constitution and  
By-Laws reported. It was ordered by the  
House that the amended Constitution and  
By-Laws be published in the Journal and  
sent to the County Societies for their infor-  
mation, as provided in the Constitution and  
By-Laws.

The Auditing Committee reported that it  
found the report of the Secretary-Treasurer-  
Editor correct. Report accepted and approv-  
ed.

The Committee on Public Policy and In-  
struction of the Public read its report. Re-  
port adopted (See report JULY JOURNAL).

The House then adjourned until 8:00 A.M.,  
May 13.

C. A. THOMPSON, Secretary.

HOUSE OF DELEGATES—May 13, 8:00 A.M.

Call to order by the President, Dr. E. S.  
Lain.

Roll of the House was reported by the Cre-  
dential Committee and called by the Secre-  
tary.

On vote of the House the regular order  
of business was deferred to hear an address  
read by the retiring President, Dr. E. S. Lain.

Dr. Claude T. Hendershot, Tulsa, presented  
a resolution on the death of Dr. Chas. H.  
Ball, formerly an officer of the Association,  
which had occurred suddenly the evening be-  
fore while Dr. Ball was attending the session.

The resolution was adopted as follows:

Resolutions relative to the death of our be-  
loved member, Dr. Charles Homer Ball.

Whereas God in his infinite wisdom has  
seen fit to remove from our midst during this



DOCTOR PLEASANT POMEROY NESBITT, PRESIDENT  
Oklahoma State Medical Association  
1925-1926



session our colleague and beloved friend Dr. Charles Homer Ball, of Tulsa—it is with deep regret and sincere sympathy that we extend to the bereaved family our condolences and to the members of the Tulsa County Medical Society our sympathy in the loss of one of their most active and aggressive members. We respectfully request that a copy of these resolutions be spread upon the records of the Association and one sent to the family of our deceased brother.

Respectfully submitted:—

C. T. Hendershot.  
W. Albert Cook  
G. A. Wall.

Dr. P. P. Nesbitt, President, then assumed the Chair and called for the election of officers, which resulted as follows:

President, Dr. A. S. Risser, Blackwell; 1st Vice-President, Dr. S. E. Mitchell, Muskogee; 2nd Vice-President, Dr. J. S. Fulton, Atoka; 3rd Vice-President Dr. R. S. Love, Oklahoma City; Delegate to the A.M.A. 1926-1927, Dr. McLain Rogers, Clinton.

Oklahoma City was selected for the meeting place for 1926.

Councillor for 3rd. District, Dr. Walter Bradford, re-elected; 5th. District, Dr. J. S. Fulton, Atoka; 8th. District, Dr. J. Hutchings White, Muskogee.

Mr. J. P. Loran, Business Manager for the Southern Medical Association addressed the House on behalf of the Association and extended an invitation to the Oklahoma profession to attend the meeting at Dallas, Texas, November, 1925.

Committee on Necrology report read by Dr. A. S. Risser as follows:

Whereas: It has pleased the Great Physician to relieve from duty and call to their well deserved rest the following physicians:

Dr. R. M. Shaw.....	Oklahoma City
Dr. Percy A. Smythe.....	Enid
Dr. J. M. Stephens.....	Hastings
Dr. J. B. Murphy.....	Stillwater
Dr. G. A. Morrison.....	Poteau
Dr. J. J. Chapman.....	Lawton
Dr. E. J. Orvis.....	Blackwell
Dr. W. J. Brinks.....	Manitou
Dr. W. E. Dicken.....	Monrovia, Cal.
Dr. J. H. Noah.....	DeNoya
Dr. F. C. Rose.....	Allen
Dr. J. R. Fleming.....	Keystone
Dr. J. T. Williams.....	Webb City
Dr. Thos. S. Williams.....	Stillwell
Dr. J. S. Hartford.....	Oklahoma City
Dr. J. Angus Gillis.....	Fredrick
Dr. J. P. Miller.....	Erick
Dr. William Nairn.....	Alluwe
Dr. J. F. McArthur.....	Wilburton

Dr. G. W. Amerson.....	Milo
Dr. L. H. Buxton.....	Long Beach, Cal.
Dr. A. J. Willard.....	Cyril
Dr. R. S. Evans.....	Claremore

We, the members of the Oklahoma State Medical Association, do hereby express our appreciation of the services of these men to organized medicine and to the people, we extend to the sorrowing relatives our sincere sympathy over their loss, and in proof we move that a copy of these resolutions be spread upon the minutes and be published in the JOURNAL.

Respectfully submitted:—

A. S. Risser,  
D. Long,  
W. A. Mayginnis.

The committee on State Medical Association Library reported. After discussion the report was accepted. (See report JULY JOURNAL).

A motion to reconsider the report of the Medical Defense Committee was lost and a motion that a committee of three from the House to confer with the Defense Committee was adopted. The following committee was named: Drs. Leonard Williams, Pawhuska; T. M. Aderhold, El Reno and J. A. Haynie, Durant.

The Committee on Resolutions reported as follows:

"Your committee on Resolutions beg to report as follows:

Whereas the City of Tulsa and the Tulsa County Medical Society have so splendidly entertained our Association and furnished such excellent facilities for the carrying out of our program;

Therefore, be it resolved, that we express our sincere appreciation to the citizens of Tulsa and particularly to the members of our Association in Tulsa County for their hospitality,

McLain Rogers,  
R. F. Terrell,  
Ross D. Long, Committee.

The resolution was adopted.

The House then adjourned.

C. A. THOMPSON, Secretary.

THE COUNCIL—May 11th, 8:00 P.M.

Present: Drs. Lain, Nesbitt, Risser, Bungalowdt, Willour, Austin, Wall, Bradford and Thompson.

Call to order by the President, Dr. E. S. Lain.

Dr. E. S. Lain presented bills for expenses incurred. Referred to a committee appointed by Dr. P. P. Nesbitt who was called to the

chair. The committee: Drs. Bradford, Wall and Bungardt.

Bills for Councillor expense ordered paid.

Auditing committee consisting of Drs. Risser, Wall and Bungardt appointed. The books and transactions of the office of Secretary-Treasurer-Editor were handed to the committee.

Moved and carried that:

The appeal of Drs. O. J. Colwick and E. P. Davis, Bryan County be considered. Dr. G. A. Wall presented the matter of Dr. B. F. Collins and Rogers County Medical Society.

Statements were heard on the Bryan County case from witnesses appearing for and against Drs. O. J. Colwick and E. P. Davis. The hearing occupying the time of the Council until adjournment which was taken after midnight. Adjourned to meet at 8:00 A.M. May 12th.

C. A. THOMPSON, Secretary.

May 12th, 8:00 A.M. In addition to the members of Council present at the last meeting, Dr. J. T. Slover, Sulphur was present. The Medical Defense Committee reported and was ordered to continue operation of medical defense as heretofore. (See report of Secretary-Treasurer-Editor, July JOURNAL).

Moved and carried that reimbursement of Dr. E. S. Lain for \$100.00 account of expense of Dr. Fishbein's trip be paid.

Moved and carried that necessary traveling expenses of the work incident to the Committee on Public Health and Education of the Public be paid.

The cases of Drs. Colwick and Davis against Bryan County were again considered at length. The Council then adjourned to meet at 4:30 P. M.

C. A. THOMPSON, Secretary.

May 12, 4:30 P. M.

Call to order, by Dr. E. S. Lain.

The Council, after hearing statements on the Colwick and Davis cases, made the following order, as to Dr. E. P. Davis:

"That the action of the Bryan County Medical Society relative to Dr. E. P. Davis be sustained, and recommends that if from this time until January 1, 1926, his conduct be not unethical, he be accepted as a member."

Action in the case of Dr. O. J. Colwick was deferred for 24 hours.

The Council then adjourned until May 13, 1:30 P. M.

C. A. THOMPSON, Secretary.

May 13, 1:30 P. M.

Call to order by the President, Dr. P. P. Nesbitt.

The Council made the following order in the case of Dr. O. J. Colwick:

"That the evidence in the case of Dr. O. J. Colwick we find that he is not in harmony with his professional colleagues of the Bryan County Medical Society, and that his admission to the Society at this time would not be for the best interests of the society or for Dr. Colwick. We recommend that all endeavors shall be made by the Bryan County Medical Society to make it possible for it to again consider the application of Dr. O. J. Colwick for membership. To this end we recommend that friendly intercourse be attempted and for the good of organized medicine and the man himself, every honorable and available means be used to influence Dr. O. J. Colwick to so conduct himself that he may become eligible for admission.

We also recommend that if he does come up for membership, that a special request be made upon the membership of the Bryan County Medical Society to have all members present at the meeting at which his application will be voted on."

The Council then adjourned.

C. A. THOMPSON, Secretary.

### *Editorial Notes—Personal and General*

DR. THOMAS B. RICHARDSON, has removed to Portales, New Mexico, from Piedmont, Okla.

DR. B. M. HUCKABAY has moved to Edmond from Tuskahoma.

DR. J. S. ROLLINS and family, Paden, left recently by auto for an outing to California.

DR. and MRS. C. E. NORTHCUTT, Ponca City are touring Europe.

DR. W. N. DAVIDSON, Cushing, has taken on a new "side-line"—building a new six room bungalow.

DR. M. SHADID, Elk City, is taking some post-graduate work in Philadelphia, after which he will leave for Europe to do further work.

STEPHENS COUNTY MEDICAL SOCIETY had a good meeting last month at Marlow; several papers were read and clinical cases presented.

DR. BENJAMIN DAVIS, Cushing, was called to San Francisco last month through illness in a brother's family.

DR. WILL H. PAYNE, Yale, is removing to Pitcher, Ottawa County, to be associated with Dr. E. A. Aisenstadt.



CREEK COUNTY is the ninth county in the state to establish a county medical unit.

DR. H. B. McFarland, has removed from Hominy to Cleveland, Okla.

DR. J. H. KAY, Holdenville, was recently appointed by the U. S. Veterans Bureau as medical examiner for the Bureau at Pittsburgh, Pa.

DR. and MRS. C. C. ALLEN, Fredrick, attended the 50th wedding anniversary of Dr. Allen's parents at Topeka, Kansas.

DR. A. W. HARRIS, Muskogee, spent ten days during April in Chicago attending the surgical clinics.

DR. S. N. CHATTERJEE, Muskogee, left June 1st for a year's trip around the world, including an extended visit to his former home in India, and a post-graduate course at the University of Edinburgh.

DRS. P. B. MYERS and J. T. PHELPS, El Reno have formed a partnership that began May 1st. Dr. Myers was formerly at Apache, while Dr. Phelps as been at El Reno for a number of years.

DR. R. C. MELOY and Mrs. Nell Brainard, Claremore, were united in marriage in April at Tulsa.

DR and MRS. G. E. STANBRO, Pawhuska, are taking the Inter-State Post Graduate Assembly trip to Europe.

DR. P. A. EDWARDS, is on vacation to Los Angeles, and will make the pilgrimage by auto to the Imperial Council of Shriners.

DR. C. W. TEDROWE, Woodward, has removed to the American National Bank Bldg., Enid, where he will establish his practice.

MAYES COUNTY MEDICAL SOCIETY elected the following officers at its April meeting; Dr. L. C. White, Adair, president; Dr. Ivadell Rogers, Pryor, secretary-treasurer, both re-elected.

DR. EMMETT O. MARTIN, formerly a member of the Payne County Medical Society, located at Signet, was united in marriage, May 26, to Miss Ruth Guild, of Bartlesville. Dr. and Mrs. Martin are now living at Three Sands.

DR. G. F. BORDER, Mayor of Mangum, was tended a banquet by the Elks Lodge previous to his departure for Europe with the Inter-State Post Graduate Assembly.

#### DOCTOR CHARLES HOMER BALL

The swift messenger of death invaded the Sessions of the Oklahoma State Medical Association at its Annual Convention at the Mayo Hotel in the city of Tulsa on May 12th, 1925, and at 2 P. M., while reading a paper before the Section on Gentio-Urinary and Skin Diseases, Dr. Chas H. Ball of Tulsa, one of our most active members was stricken with a cerebral hemorrhage, dying seven hours later at his home, despite the efforts of his closest friends in the profession of his own city, and some of the most noted specialists of the State in attendance at the State meeting.

Dr. Ball was born at Powellsville, Ohio, September 1, 1867, and received his education at the Southern Illinois Normal, later attending St. Louis University, from which he received his degree in 1906.

At the time of his death Dr. Ball was 57 years of age. He was associated with the St. Louis Skin and Cancer Hospital for a period of ten years. Removing to Tulsa in 1917 he soon built up a splendid practice as a Dermatologist and X-Ray expert taking an active part in the Tulsa County and Oklahoma State Medical Association; he served in various offices in both, having been President of Tulsa County Medical Society in 1921, Vice-President and Councillor of the State Association the following year.

In the death of Dr. Ball, Tulsa County loses one of its most valuable members as he was ever ready and willing to do his part for the advancement of the Society and the profession he loved so well. Dr Ball was married in St. Louis in 1893, the widow and four children are left to mourn his departure.

#### DOCTOR THOMAS JEFFERSON SHINN

Dr. Shinn was born November 13, 1875, in Arkansas, died May 9, 1925, at his home in Wagoner, Oklahoma, of Miliary Tuberculosis, having nearly finished half a century of life. He was an Alumnus of the Medical College of his native State at Little Rock, he was also President of the Wagoner County Medical Society, member of Oklahoma State and American Medical Associations. He practiced his profession for a short time in Arkansas before locating in Wagoner, and here his life's battles were fought, his defeats endured, and victories won.

His abilities were of a high order especially as a Surgeon, and he was recognized among his Confreres as a man of much more than ordinary attainments in his chosen field, that of Surgery. As a citizen he was noted for his sympathy for the sick and afflicted, and as a Physician he was always ready and willing to help with anything in his power, regardless of remuneration, he took great interest in all matters of a civic nature that were for the betterment of his Town, County and State.

His death occurring just when his Sun should have been shining brightest, is a distinct and severely felt loss to the Community, to his profession, and to his family.

And we as members of Wagoner County Medical Society, tender to his family our sincere sympathy.

C. E. HAYWARD, Secretary,  
S. R. BATES, Vice-President,  
G. W. JOBE,  
J. T. MOON,  
J. H. PLUNKETT.

STEPHENS COUNTY MEDICAL SOCIETY decided at its last meeting to invite some out of the county Doctors to be present to conduct a tuberculosis and orthopedic clinic. Dr. J. O. Wharton reported an interesting case of cretinism, and Dr. S. H. Williamson a case of convulsions in a small child, both reports being freely discussed.

PAYNE COUNTY MEDICAL SOCIETY enjoyed a very pleasant and profitable evening May 6th as guest of the Stillwater fraternity. Those on the program were Drs. Carl Puckett, State Commissioner of Health, and D. T. Bowden, and I. A. Briggs. The attendance was excellent, and Perkins was the only one of the six towns in the Society not represented.

OKLAHOMA COUNTY MEDICAL ASSOCIATION is reported to be forming a ladies auxiliary, for the purpose of promoting better social and professional relations. Officers recently elected are: Mrs. Edward P. Allen, president; Mrs. Thomas H. Flesher, Edmond, 1st vice-president; Mrs. J. E. Harbison, 2nd vice-president; Mrs. S. E. Frierson, corresponding secretary; Mrs. Earl D. McBride, recording secretary, and Mrs. Basil A. Hayes treasurer.

#### DOCTOR JOHN STERLING CARRIGER

Died at Chelsea, Oklahoma. Dr. J. S. Carriger, May 19th, 1925.

Dr. Carriger was born June 15, 1863 in Russell County, Alabama, and received his degree from Bellevue Hospital Medical College March 15, 1886. He had been practicing his profession for many years in Oklahoma, having been licensed before statehood, and was held in high esteem by his friends and members of his profession.

#### RESOLUTION

Whereas, the hand of the Almighty has lain upon our brother, John Sterling Carriger, M.D., Chelsea, Rogers Co., Oklahoma, and he sleeps the sleep that knows no waking, having departed this life May, 19th 1925.

Whereas, Doctor Carriger was a pioneer in our midst and had devoted long years to his chosen profession and been a blessing to the community in which he lived and a worthy member of our profession.

Therefore, be it resolved by the Rogers County Medical Society, that in the passing of our Brother, Doctor J. C. Carriger, the Medical profession has lost one of its valuable members, the city and community, a doctor and citizen of sterling worth.

Be it further, RESOLVED, that a copy of these resolutions, be spread upon our minutes, as a permanent record, a copy furnished the family of our departed brother, the State Medical Journal and the local paper.

#### COMMITTEE:—

Wm. P. Mills M.D.  
R. C. Meloy M.D.  
F. A. Anderson M.D.

DR. ANDREW G. COWLES, Ardmore, was married May 12, to Miss Ruth Chapman, Waxahachie, Texas; they will join the Inter-State Post Graduate Assembly tour to Europe. On his return Dr. Cowles will specialize in Surgery and Gynecology.

UNIVERSITY HOSPITAL MEDICAL SCHOOL graduates held an annual banquet last month at the Skirvin Hotel, Oklahoma City; Dr. Horace Reed was toastmaster, and Dean LeRoy Long was the principal speaker. Guests included Governor and Mrs. Trapp.

#### CHILD MANAGEMENT\*

Dr. D. A. Thom

#### Good Habits May Be Taught

Tendencies toward thinking and acting in certain ways, which are called habits, are the outgrowth of training and experience. They are not inherited. We begin to form habits at birth and go on through life, forming them quickly and easily in youth and more slowly and with difficulty as the years advance. The oftener the act is repeated or the thought is indulged in the more lasting the habit becomes. Since habit formation begins early and is more or less constant throughout life it is of great importance that emphasis be placed upon establishment of desirable habits.

A young child has certain characteristics that make the acquiring of new habits easy. For one thing, he is suggestible; that is, he accepts without reasoning about it anything which comes from a person he looks up to. "My father said so" or "My mother did it" makes a thing absolutely right for a little child. Again, a child naturally tends to imitate the words, actions, and attitudes of the people around him, and this makes it of the greatest importance that older people furnish him the kind of models they want to have copied. Furthermore, a child wants to please those he loves and wants to have them say so. At first it is only father or mother or some one in the immediate family whose good opinion he wants. Then it is the kindergarten or school teacher. Finally, at 9 or 10, the praise or blame of his playmates or of the gang leader concerns him more than anything else. When this stage is reached parents should not be disheartened and think that their boy is developing into a black sheep. It is a perfectly natural stage which children pass through and which calls only for greater care in the selection of wholesome companions.

This attitude of concern regarding what other people think is a force that parents may use in developing right conduct. Rarely is a child found who does not care for the approval of some one, and training should make a child realize that it is to his advantage to win approbation for desirable acts. Praise for unselfishness, kindness, and general consideration for others tend to perpetuate that type of conduct.

\* This article is part of Publication No. 143 of the Children's Bureau of the U. S. Department of Labor, Washington, D. C. The entire bulletin may be secured free by writing to the Bureau.



# R O S T E R

## OKLAHOMA STATE MEDICAL ASSOCIATION

### 1925

#### ADAIR COUNTY

John L Bean.....	Westville
Dorsey P Chambers.....	Stillwell
Robert M Church.....	Stillwell
Benjamin F Collins.....	Claremore
Joseph A Patton.....	Stillwell
Isaac Walton Rogers.....	Watts
R L Sellars.....	Westville
Thomas S Williams*.....	Stillwell

#### ALFALFA COUNTY

Z J Clark.....	Cherokee
M T Evans.....	Aline
C O Gingles.....	Carmen
L T Lancaster.....	Cherokee
H A Lile.....	Cherokee
T A Rhodes.....	Cherokee

#### ATOKA COUNTY

Thomas F Briggs.....	Atoka
J W Crews.....	Stringtown
Henry A Ellis.....	Daisy
Joseph S Fulton.....	Atoka
Charles C Gardner.....	Atoka
J W Rollins.....	Tushka

#### BECKHAM COUNTY

L D Conn.....	Webb City
J M Denby.....	Carter
A A Huntley.....	Elk City
J A Jester.....	Elk City
E S Kilpatrick.....	Elk City
Robert C McCreery.....	Erick
J E Mitchell.....	Hammon
W D Oliver.....	Erick
T D Palmer.....	Elk City
G W Phillips.....	Sayre
K R Rone.....	Elk City
M Shadid.....	Elk City
H K Speed.....	Sayre
G H Stagner.....	Erick
J E Standifer.....	Elk City
DeWitt Stone.....	Sayre
W C Threlkeld.....	Sweetwater
V C Tisdal.....	Elk City
J D Warford.....	Erick
O N Windle.....	Sayre

#### BLAINE COUNTY

J S Barnett.....	Hitchcock
J W Browning.....	Geary
H E Huston.....	Watonga
L H Murdoch.....	Okeene
A F Padberg.....	Canton

#### BRYAN COUNTY

W H Allder.....	Blue
J R Allen.....	Healdton
D Armstrong.....	Durant
J L Austin.....	Durant
W G Austin.....	Mead
J A Bates.....	Kemp
P L Cain.....	Albany
James T Colwick.....	Durant
C D Dale.....	Caddo
H B Fuston.....	Bokchito
R H Grassham.....	Caddo
C J Green.....	Durant
A S Hagood.....	Durant
John A Haynie.....	Durant
F M Jackman.....	Mead

\*Deceased

J R Keller.....	Calera
Robert A Lively.....	Durant
D C McCalib.....	Utica
W H McCarley.....	Colbert
H B McKinney.....	Durant
B H Moore.....	Durant
H P Pope.....	Bennington
S W Rains.....	Platter
H C Ricks P O Box 1237.....	Oklahoma City
J P Rutherford.....	Bennington
R E Sawyer.....	Durant
James L Shuler.....	Durant
C F Taliaferro.....	Bennington
C E Wann.....	Albany
A J Wells.....	Calera
W S Work.....	Bokchito

#### CADDO COUNTY

P H Anderson.....	Anadarko
W C Barton, Indian Office.....	Washington D C
Samuel Blair.....	Apache
B D Brown.....	Apache
J R Bryan.....	Cogar
George C Campbell.....	Anadarko
J H Cantrell.....	Carnegie
I Ross Clark.....	Carnegie
George B Coker.....	Cyril
F Dinkler.....	Fort Cobb
W L Dixon.....	Cement
Edward W Downs.....	Hinton
M H Edens.....	Anadarko
C P Gillespie.....	Anadarko
W T Hawn.....	Binger
J J Henke.....	Hydro
A F Hobbs.....	Hinton
Charles R Hume.....	Anadarko
E L Inman.....	Apache
R E Johnston.....	Bridgeport
W W Kerley.....	Anadarko
C W Lane, 709 Valencia St.....	Walla Walla, Wash
P L McClure.....	Fort Cobb
C B McMillan.....	Gracemont
C N Meador.....	Anadarko
John W Padberg.....	Carnegie
W B Putnam.....	Carnegie
R D Rector.....	Anadarko
F W Rogers.....	Carnegie
N E Ruhl.....	Hydro
C A Smith.....	Hinton
A H Taylor.....	Anadarko
H Vann Wade.....	Cement
R W Williams.....	Anadarko
S E Williams.....	Hydro

#### CANADIAN COUNTY

T M Aderhold.....	El Reno
H C Brown.....	El Reno
W B Catto.....	El Reno
H A Dever.....	El Reno
P F Herod.....	El Reno
T V Kuchar.....	Yukon
Thomas Lane.....	El Reno
W J Muzzy.....	El Reno
P B Myers.....	El Reno
Charles M Pearce.....	Calumet
J T Phelps.....	El Reno
D P Richardson.....	Union City
Thomas B Richardson.....	Portales New Mexico
J T Riley.....	El Reno

S S Sanger.....Yukon  
D F Stough.....Geary  
G W Taylor.....El Reno  
J E Tomkins.....Yukon  
S F Wildman.....El Reno  
L G Wolf.....Okarche

## CARTER COUNTY

E R Barker.....Healdton  
J T Barnwell.....Graham  
F W Boadway.....Ardmore  
J H Cameron.....Healdton  
William H Campbell.....Wilson  
A G Cowles.....Ardmore  
J L Cox.....Ardmore  
S DePorte.....Ardmore  
Thomas W Dowdy.....Wilson  
A Y Easterwood.....Ardmore  
O J Gee.....Ardmore  
L D Gillespie.....Berwyn  
Walter Hardy.....Ardmore  
W G Hathaway.....Lone Grove  
Robert H Henry.....Ardmore  
H A Higgins.....Springer  
S J T Hines.....Wirt  
T J Jackson.....Ardmore  
G E Johnson.....Ardmore  
Walter M Johnson.....Ardmore  
Waldo B Lain.....Ardmore  
L A McComb.....Wilson  
J R McCracken.....Wilson  
J C McNees.....Ardmore  
W A Merriott.....Brock  
Y M Miller.....Wirt  
J R Pollock.....Ardmore  
W C Sain.....Ardmore  
J W Shelton.....Ardmore  
R C Sullivan.....Ardmore  
Dow Taylor.....Woodford  
F P von Keller.....Ardmore

## CHEROKEE COUNTY

J S Allison.....Tahlequah  
Swarts Baines.....Tahlequah  
A A Baird.....Tahlequah  
W G Blake.....Tahlequah  
T J Bond.....Tahlequah  
P H Medearis.....Tahlequah  
Joseph M Thompson.....Tahlequah

## CHOCTAW COUNTY

E R Askew.....Hugo  
J F Gee.....Ervin Route Hugo  
Robert L Gee.....Hugo  
C H Hale.....Boswell  
K P Hampton.....Soper  
G E Harris.....Hugo  
Thomas Henderson.....Fort Towson  
W N John.....Hugo  
Edgar A Johnson.....Hugo  
V L McPherson.....Boswell  
J S Miller.....Hugo  
J D Moore.....Hugo  
R J Shull.....Hugo  
Hal H White.....Hugo  
Reed Wolff.....Hugo  
William M Yeargan.....Soper

## CLEVELAND COUNTY

C S Bobo.....Norman  
Charles A Brake.....Norman  
G M Clifton.....Norman  
B H Cooley.....Norman  
J L Day.....Norman  
T J Dodson.....Norman  
Gayfree Ellison.....Norman  
C W Grady.....Moore  
D W Griffin.....Norman  
J B Lambert.....Lexington  
R D Lowther.....Norman

W T Mayfield.....Norman  
Carl Steen.....Norman  
E F Stephens.....Norman  
R E Thacker.....Lexington  
J M Thuringer.....Norman  
Louis A Turley.....Norman  
G W Wiley.....Norman  
J M Williams.....Norman

## COAL COUNTY

Frank Bates.....Coalgate  
W T Blount.....Tupelo  
J B Clark.....Coalgate  
R D Cody.....Centrahoma  
L A Conner.....Coalgate  
H G Goben.....Lehigh  
J J Hipes.....Coalgate  
H M Wheeler.....Helena

## COMANCHE COUNTY

H A Angus.....Lawton  
J T Antony.....Lawton  
C W Baird.....Medicine Park  
G S Barber.....Lawton  
Jackson Broshears.....Lawton  
E B Dunlap.....Lawton  
P G Dunlap.....Lawton  
L T Gooch.....Lawton  
Fred W Hammond.....Lawton  
J R Hood.....Indianapolis  
C P Hues.....Lawton  
Charles W Joyce.....Fletcher  
George E Kerr.....Chatanooga  
L C Knee.....Lawton  
Thomas R Lutner.....Lawton  
J W Malcolm.....Lawton  
C W Martin.....Elgin  
W J Mason.....Lawton  
W B Mead.....Lawton  
E Brent Mitchell.....Lawton  
J Allen Perisho.....Cache  
Alexander H Stewart.....Lawton

## COTTON COUNTY

C W Alexander.....Temple  
Lloyd B Foster.....Walters  
A B Holsted.....Temple  
C F House.....Hasting

## CRAIG COUNTY

F M Adams.....Vinita  
Louis Bagby.....Vinita  
C P Bell.....Welch  
W M Campbell.....Vinita  
N L Cornwell.....Meridian  
J W Craig.....Vinita  
B L Elam.....Centralia  
F T Gastineau.....Vinita  
P L Hays.....Vinita  
A W Herron.....Vinita  
L C Hix.....Bernice  
W R Marks.....Vinita  
R L Mitchell, Veterans Hospital.....Muskogee  
C S Neer.....Vinita  
E A Pickens.....Grove  
L J Pierce.....Vinita  
D B Stough.....Vinita  
Charles F Walker.....Grove  
J L Wharton.....Ketchum

## CREEK COUNTY

F L Artz.....Kiefer  
W G Bisbee.....Bristow  
O C Coppedge.....Bristow  
O S Coppedge.....Depew  
G C Croston.....Sapulpa  
C M Driver.....Mounds  
C M Gillespie.....Bristow  
H R Haas.....Sapulpa  
B C Harris.....Sapulpa  
J E Hollis.....Bristow



J W Hoover	Sapulpa
Alva Jones	Sapulpa
Ellis Jones	Sapulpa
C Edgar Kahle	Drumright
E W King	Bristow
Ernest Kraft	Sapulpa
J B Lampton	Sapulpa
R E Leatherock	Drumright
P K Lewis	Sapulpa
W P Longmire	Sapulpa
A E Martin	Bristow
W A Martin	Sapulpa
J A Mattenlee	Sapulpa
C L McCallum	Sapulpa
C R McDonald	Mannford
Charles H Morris	Slick
W J Neal	Drumright
J T Price	Shamrock
C B Reese	Sapulpa
E W Reynolds	Bristow
S W Reynolds	Drumright
W P Robinson	Sapulpa
Paul Sanger	Drumright
Charles T Schrader	Bristow
B C L Schwab	Sapulpa
W H Sisler	Bristow
Leo L Smith	Avant
O W Starr	Drumright
Roy M Sweeney	Sapulpa
Z G Taylor	Mounds
F W Turner	Sapulpa
John M Wells	Bristow
George H Wetzell	Sapulpa
J Clay Williams	Mercedes, Texas
Richard S Wilson	Oilton

## CUSTER COUNTY

W I Basinger	Butler
T A Boyd	Weatherford
C L Brundage	Thomas
E E Darnell	Clinton
J T Frizzell	Clinton
D Gade	Weatherford
J Matt Gordon	Weatherford
K D Gossom	Custer
A J Jeter	Clinton
Ellis Lamb	Clinton
C H McBurney	Clinton
O H Parker	Custer
McLain Rogers	Clinton
J J Williams	Weatherford
O W Wright	Putnam

## DEWEY COUNTY

Frank W Allen	Leedey
W E Seba	Leedey

## GARFIELD COUNTY

J W Baker	Enid
Paul B Champlin	Enid
Leo W Cotton	Enid
Julian Feild	Enid
Glenn Francisco	Enid
John W Francisco	Enid
G G Harris	Lahoma
J H Hays	Enid
T B Hinson	Enid
Frank A Hudson	Enid
William L Kendall	Enid
William G Kiebler	Enid
J E Mahoney	Enid
E Margo	Covington
S N Mayberry	Enid
S H McEvoy	Enid
A L McInnis	Enid
W B Newell	Enid
A S Piper	Enid
W H Rhodes	Enid
D D Roberts	Enid

F P Robinson	Hillsdale
Roy D Stone	Covington
J R Swank	Enid
John R Walker	Enid
J M Watson	Enid
R H Wigner	Enid
A E Wilkins	Covington
Eugene J Wolff	Waukomis

## GARVIN COUNTY

T C Brannum	Pauls Valley
James R Callaway	Pauls Valley
John R Callaway	Pauls Valley
J E Cochran	Wynnewood
H V Dresbach	Maysville
Lewis Gaddy	Stratford
W P Greening	Pauls Valley
T F Gross	Lindsay
G L Johnson	Pauls Valley
E H Lain	Lindsay
John K Lindsey	Elmore City
N H Lindsey	Pauls Valley
H P Markham	Pauls Valley
E E Norvell	Wynnewood
C M Pratt	Lindsay
M E Robberson	Wynnewood
J B Shannon, 105 W 13 St.	Oklahoma City
A H Shi	Stratford
James W Stevens	Pauls Valley
C L Sullivan	Elmore City
Ernest Sullivan	Elmore City
J W Tucker	Lindsay
W B Wallace	Maysville
H P Wilson	Wynnewood
J A Young	Clinton

## GRADY COUNTY

J C Ambrister	Chickasha
H C Antle	Chickasha
W R Barry	Alex
Walter J Baze	Chickasha
Martha Bledsoe	Chickasha
William L Bonnell	Chickasha
U C Boon	Chickasha
W H Cook	Chickasha
C P Cox	Ninnekah
E L Dawson	Chickasha
D S Downey	Chickasha
L E Emanuel	Chickasha
H M Evans	Rush Springs
G R Gerard	Chickasha
P J Hampton	Rush Springs
W W Henegar	Ninnekah
A E Hennings	Tuttle
R R Hume	Minco
A B Leeds	Chickasha
J S Little	Minco
W H Livermore	Chickasha
S O Marrs	Chickasha
H C Masters	Minco
G M McVey	Verden
C P Mitchell	Chickasha
A W Nunnery	Chickasha
Claude E Putnam, U S Interior Dept.	Tohatchi, New Mexico
J F Renegar	Tuttle

## GRANT COUNTY

G T Drennan	Pond Creek
A L Hamilton	Manchester
I V Hardy	Medford
E E Lawson	Medford
S A Lively	Wakita
J F Martin	Deer Creek
J Marshall Tucker	Nash

## GREER COUNTY

C W Austin	Mangum
G F Border	Mangum
W O Dodson	Willow

H W Finley.....	Vinson
J B Hollis.....	Mangum
O R Jeter.....	Brinkman
J B Lansden.....	Granite
J T Lowe.....	Mangum
Frank H McGregor.....	Mangum
J S Meredith.....	Duke
Ney Neel.....	Mangum
T J Nunnery.....	Granite
L E Pearson.....	Mangum
E M Poer.....	Mangum
C C Shaw.....	Brinkman
T L Willis.....	Granite

## HARMON COUNTY

J S McFadin.....	Hollis
Wm T Ray.....	Gould

## HASKELL COUNTY

John Davis.....	Stigler
A T Hill.....	Stigler
E Johnson.....	Kinta
R E Jones.....	Stigler
R F Terrell.....	Stigler
T B Turner.....	Stigler
M Van Matre.....	Keota
N K Williams.....	McCurtain

## HUGHES COUNTY

W D Atkins.....	Holdenville
J A Bentley.....	Stewart
W B Bentley.....	Calvin
A M Butts.....	Holdenville
A L Davenport.....	Holdenville
G W Diggs.....	Wetumka
T B Felix.....	Holdenville
L J George.....	Stewart
Samuel H Hamilton.....	Non
C A Hicks.....	Wetumka
H A Howell.....	Holdenville
J N Johnson.....	Atwood
J H Kay.....	Holdenville
L M Lett.....	Dustin
John W Lowe.....	Holdenville
C C Martin.....	Calvin
D Y McCary.....	Holdenville
P E Mitchell.....	Wetumka
R M Morris.....	Gertie
J F Musser.....	Calvin
C E Parker.....	Dustin
G W Patterson.....	Wetumka
J D Scott.....	Holdenville
W L Taylor.....	Gertie
Charles S Wallace.....	Dustin
Francis P Wiggins.....	Wetumka

## JACKSON COUNTY

Edward A Abernethy.....	Altus
R F Brown.....	Altus
E S Crowe.....	Olustee
R H Fox.....	Altus
W W Hall.....	Altus
T H Hardin.....	Elmer
J B Hix.....	Altus
James A Humphrey.....	Martha
E M Mabry.....	Altus
L H McConnell.....	Altus
W H Price.....	Eldorado
W P Rudell.....	Altus
W E Sanderson.....	Altus
C G Spears.....	Altus
John S Stults.....	Olustee
H R Taylor.....	Eldorado
R Z Taylor.....	Blair

## JEFFERSON COUNTY

W T Andreskowski.....	Ryan
W M Browning.....	Waurika
D B Collins.....	Waurika
J I Derr.....	Waurika
M L Hutchison.....	Ryan

C M Maupin.....	Waurika
L B Sutherland.....	Wilson
L L Wade.....	Ryan
J W Watson.....	Ryan

## JOHNSTON COUNTY

Guy Clark.....	Wapanuka
J T Looney.....	Tishomingo

## KAY COUNTY

C W Arrendell.....	Ponca City
G L Berry.....	Blackwell
Charles L Blanks.....	Ponca City
Howard S Browne.....	Ponca City
M Clift.....	Blackwell
P A Edwards.....	Nardin
R B Gibson.....	Ponca City
H O Gowey.....	Newkirk
J W Green.....	Kaw City
A R Hancock.....	Tonkawa
A R Havens.....	Blackwell
J C Hawkins.....	Blackwell
A L Hazen.....	Newkirk
Lawson Hughes.....	Tonkawa
J A Jones.....	Tonkawa
W M Leslie.....	Blackwell
W A Lockwood.....	Ponca City
Allen Lowery.....	Blackwell
William N McClurkin.....	Ponca City
S S McCullough.....	Braman
Thomas McElroy.....	Ponca City
R B McKinney.....	Tonkawa
D W Miller.....	Blackwell
George H Neiman.....	Ponca City
C E Northcutt.....	Ponca City
A S Nuckols.....	Ponca City
A S Risser.....	Blackwell
W A T Robertson.....	Ponca City
Herbert C Schenck.....	Newkirk
H M Stricklin.....	Tonkawa
A C Syfert.....	Blackwell
L C Vance.....	Ponca City
E E Waggoner.....	Tonkawa
J C Wagner.....	Ponca City
I D Walker.....	Blackwell
J W Werner.....	Newkirk
N S White.....	Blackwell
J T E Widney.....	Kaw City
J C Woll.....	Tonkawa

## KIOWA COUNTY

J D Ballard.....	Mountain View
J M Bonham.....	Hobart
J R Bryce.....	Snyder
A T Dobson.....	Hobart
Melvin Gray.....	Mountain View
J T Hamilton.....	Snyder
A H Hathaway.....	Mountain View
J A Land.....	Lone Wolf
H C Lloyd.....	Hobart
F Frank Martin.....	Roosevelt
William McIlwain.....	Lone Wolf
J H Moore.....	Hobart
J A Muller.....	Snyder
John R Reid.....	Hobart
J M Ritter.....	Roosevelt
F E Walker.....	Lone Wolf
Barton H Watkins.....	Gotebo
J D Winter.....	Hobart

## KINGFISHER COUNTY

E R Cavett.....	Loyal
A Dixon.....	Hennessey
Charles W Fisk.....	Kingfisher
C O Gose.....	Hennessey
A O Meredith.....	Kingfisher
J A Overstreet.....	Kingfisher
Newton Rector.....	Hennessey
Frank Scott.....	Kingfisher
Benjamin I Townsend.....	Hennessey



## LATIMER COUNTY

A C Byars	Dow
E L Evins	Wilburton
E B Hamilton	Wilburton
J M Harris	Wilburton
T L Henry	Wilburton
C R Morrison	Samoa, California
R L Rich	Red Oak

## LEFLORE COUNTY

J B Beckett	Spiro
S D Bevill	Poteau
J M Bolger	Poteau
G R Booth	Leflore
E A Campbell	Heavener
E L Collins	Panama
S C Dean	Howe
E N Fair	Heavener
W C Gilliam	Spiro
Harrell Hardy	Poteau
J J Hardy	Poteau
A G Hunt	Bokoshe
W F Lunsford	Poteau
W Z McClain	Heavener
R W Minor	Williams
A M Mixon	Spiro
R M Sheppard	Talihina
Edgar E Shippey	Wister
G E Watkins	Stapp
J B Wear	Poteau
B D Woodson	Poteau
Earl M Woodson	Poteau
R L Wright	Talihina

## LINCOLN COUNTY

J W Adams	Chandler
Joseph E Anderson	Agra
W D Baird	Stroud
F B Erwin	Wellston
P F Erwin	Wellston
J O Glenn	Stroud
E E Goodrich	Carney
J M Hancock	Chandler
R H Hannah	Prague
C O Lively	Ralston
A M Marshall	Chandler
C M Morgan	Chandler
Levi Murray	Wellston
W G Nash	Sparks
U E Nickell	Davenport
J R Waltrip	Coweta

## LOGAN COUNTY

C B Barker	Guthrie
E O Barker	Guthrie
Pauline Barker	Guthrie
F M Barnes	Marshall
J O Butler	Crescent
A G T Childers	Mulhall
Dan Gray	Guthrie
L A Hahn	Guthrie
C B Hill	Guthrie
H W Larkin	Guthrie
J L Melvin	Guthrie
William C Miller	Guthrie
C S Petty	Guthrie
L H Ritzhaupt	Guthrie
J E Souter	Guthrie
David Stevens	Guthrie
F E Trigg	Guthrie
A A West	Guthrie

## LOVE COUNTY

D Autry	Marietta
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## MAJOR COUNTY

John V Anderson	Fairview
F M Edwards	Ringling
B F Johnson	Fairview
Elsie L Specht	Fairview

## MARSHALL COUNTY

T A Blaylock	Madill
William H Ford	Kingston
J I Gaston	Madill
W D Haynie	Kingston
J L Holland	Madill
E F Lewis	Kingston
J H Logan	Lebanon
H E Rappolee	Madill
P F Robinson	Madill
O E Welborn	Kingston

## MAYES COUNTY

J L Adams	Hobart
Sylba Adams	Pryor
W C Bryant	Choteau
W P Couch	Spavinaw
J E Hillis	Pryor
J E Hollingsworth	Strang
John D Leonard, 2018 Oklahoma Ave	Muskogee
J L Mitchell	Pryor
B L Morrow	Salina
E L Pierce	Pryor
Carl Puckett, State Capitol	Oklahoma City
Ivadel Rogers	Pryor
S C Rutherford	Locust Grove
William J Whitaker	Pryor
L C White	Adair

## McCLAIN COUNTY

O O Dawson	Wayne
I N Kolb	Blanchard
W C McCurdy	Purchell
W B Slover	Blanchard
J W West	Purcell

## McCURTAIN COUNTY

N L Barker	Broken Bow
Eugene Baylis	Idabel
A W Clarkson	Valliant
R C Farrier	Idabel
Edwin A Kelleam	Garvin
W H McBrayer	Haworth
C T McDonald	Broken Bow
Benjamin F Moreland	Shults
J T Moreland	Idabel
W A Moreland	Idabel
R H Sherrill	Broken Bow
W D Taylor	Eagletown
J M Thompson	Broken Bow
R D Williams	Idabel
N D Woods	Millerton

## McINTOSH COUNTY

Dyton Bennett	Texanna
G W Graves	Hitchita
L I Jacobs	Vivian
N P Lee	Checotah
D E Little	Eufaula
J H McCulloch	Checotah
A L Mobley, Veterans Hospital	Muskogee
A J Pope	Hanna
B F Rushing	Hanna
J N Shaunty	Eufaula
F L Smith	Fame
William A Tolleson	Eufaula
G W West	Eufaula

## MURRAY COUNTY

Paul V Annadown	Sulphur
Howson C Bailey	Sulphur
John E Bailey	Sulphur
A P Brown	Davis
R Dunn	Davis
J C Luster	Davis
P S Mitchell	Sulphur
A V Ponder	Sulphur
W H Powell	Sulphur
John T Slover	Sulphur
John T Wharton	Sulphur
W H Williamson	Sulphur

## MUSKOGEE COUNTY

A E Carder.....	Coweta
S G Hamm.....	Haskell
R T Harrod.....	Keefeton
J I Hollingsworth, Phillipine Islands	
.....Del Carmen Pampanga	
O E Howell.....	Oktaha
W R Joblin.....	Porter
John E Lee.....	Haskell
S W Minor.....	Boynton
W E Pearce.....	Boynton
T T Shakelford.....	Haskell
J W Sosbee.....	Gore
B O Young.....	Balko

## Muskogee, Oklahoma

H T Ballantine.....	Surety Bldg
W D Berry.....	Barnes Bldg
J L Blakemore.....	Barnes Bldg
S N Chatterjee.....	Exchange Bldg
C E DeGroot.....	Equity Bldg
R N Donnell.....	Raymond Bldg
K M Dwight.....	808 No C St
A N Earnest.....	Barnes Bldg
Albert W Everly.....	Equity Bldg
F W Ewing.....	Surety Bldg
F B Fite.....	Barnes Bldg
William P Fite.....	Barnes Bldg
W E Floyd.....	Equity Bldg
S J Fryer.....	Surety Bldg
C M Fullenwider.....	Barnes Bldg
A W Harris.....	Surety Bldg
James G Harris.....	Exchange Bldg
Charles W Heitzman.....	Barnes Bldg
R N Holcombe.....	Surety Bldg
Emma S Keith.....	15th & Bway
F S King.....	Surety Bldg
O C Klass.....	Surety Bldg
S E Mitchell.....	Veterans Hospital
Charles P Murphy.....	Veterans Hospital
Shade D Neely.....	Barnes Bldg
P P Nesbitt.....	Surety Bldg
J T Nichols.....	Equity Bldg
I B Oldham.....	Surety Bldg
J G Rafter.....	Metropolitan Bldg
John Reynolds.....	1st Nat'l Bldg
C V Rice.....	Barnes Bldg
H C Rogers.....	Manhattan Bldg
H A Scott.....	Manhattan Bldg
G W Stewart.....	Equity Bldg
A L Stocks.....	Barnes Bldg
Claude A Thompson.....	Barnes Bldg
M K Thompson.....	Surety Bldg
W T Tilly.....	Barnes Bldg
James S Vittum.....	Barnes Bldg
Floyd E Watterfield.....	Exchange Bldg
Charles E White.....	Surety Bldg
J Hutchings White.....	Surety Bldg
Fred J Wilkiemeyer.....	Barnes Bldg

## NOBLE COUNTY

Lambert Kuntz.....	Perry
Harry McQuown.....	Red Rock
Benjamin A Owen.....	Perry

## NOWATA COUNTY

Edward F Collins.....	Nowata
John R Collins.....	Nowata
Fred R Dolson.....	Nowata
David M Lawson.....	Nowata
S P Roberts.....	Alluwe
M B Scott.....	Delaware
J P Sudderth.....	Nowata
George A Waters.....	Lenapah

## OKFUSKEE COUNTY

Allen C Adams.....	Weleetka
C M Bloss.....	Okemah
C C Bombager.....	Paden

A M Chambers.....	Weleetka
W H Davis.....	Castle
J C Dovell.....	Paden
F E Hilsmeier.....	Weleetka
W P Jenkins.....	Beardon
J A Kennedy.....	Okemah
R Keyes.....	Okemah
A C Lucas.....	Castle
H A May.....	Okemah
Roy George Melinder.....	Okemah
L A Nye.....	Okemah
J M Pemberton.....	Okemah
J C Pitchford.....	Shamrock
J R Preston.....	Weleetka
T R Preston.....	Weleetka
J S Rollins.....	Paden
J L Spickard.....	Okemah
A J Stephenson.....	Okemah
H Wesley Yeats.....	Okemah

## OKLAHOMA COUNTY

Thomas H Flesher.....	Edmond
Karl Haas.....	Harrah
James I Lyon.....	Edmond
E F Milligan.....	Geary
M H Newman.....	Los Angeles, Cal
Arthur M Ruhl.....	Edmond
S N Stone.....	Edmond

## Oklahoma City, Oklahoma

J M Alford.....	805 Medical Arts Bldg
Edward P Allen.....	1115 Medical Arts Bldg
Leila E Andrews.....	611 Medical Arts Bldg
William H Bailey.....	301 West 12 St
Ray M Balyeat.....	1103 Medical Arts Bldg
Charles E Barker.....	1216 Medical Arts Bldg
E T Barker.....	Packtown P O
C N Berry.....	1010 Medical Arts Bldg
James G Binkley.....	133½ West C St
C D Blachly.....	407 Medical Arts Bldg
Lucile S Blachly.....	1304 East 17 St
A L Blesh.....	301 West 12 St
Nathan Boggs.....	1st Nat'l Bldg
Floyd Bolend.....	1010 Medical Arts Bldg
Rex Bolend.....	1010 Medical Arts Bldg
George L Borecky.....	City Hall Bldg
H C Bradley.....	American Bldg
Austin I Brown.....	404 Medical Arts Bldg
Thomas A Buchanan.....	American Bldg
Albert Cates.....	712 Medical Arts Bldg
J J Caviness.....	1111 Medical Arts Bldg
A B Chase.....	Colcord Bldg
H H Cloudman.....	1017 Medical Arts Bldg
Cyril E Clymer.....	812 Medical Arts Bldg
A J Coley.....	403 Medical Arts Bldg
Paul H Crawford.....	1016 Medical Arts Bldg
B A Credille.....	601 Medical Arts Bldg
James Culbertson.....	Mercantile Bldg
S R Cunningham.....	1112 Medical Arts Bldg
Curtis R Day.....	1st Nat'l Bldg
Francis A DeMand.....	315 Colcord Bldg
Walter H Dersch.....	Shops Bldg
Green K Dickson.....	1213 Medical Arts Bldg
W E Dixon.....	1st Nat'l Bldg
R O Early.....	Shops Bldg
E G Earnhart.....	402 Medical Arts Bldg
William E Eastland.....	705 Medical Arts Bldg
R T Edwards.....	1st Nat'l Bldg
J B Eskridge Jr.....	1115 Medical Arts Bldg
Edmond S Ferguson.....	902 Medical Arts Bldg
C J Fishman.....	132 West 4 St
W A Fowler.....	101 East 7 St
S E Frierson.....	1st Nat'l Bldg
Fred F Fulton.....	American Bldg
George Fulton.....	American Bldg
George H Gillan.....	Colcord Bldg
E Goldfain.....	Veterans Bureau
Austin L Guthrie.....	1010 Medical Arts Bldg



Clark H Hall.....1st Natl Bldg  
 Paul E Haskett.....1st Natl Bldg  
 J A Hatchett.....812 Medical Arts Bldg  
 B A Hayes.....Colcord Bldg  
 John E Heatley.....1115 Medical Arts Bldg  
 Fred B Hicks.....American Bldg  
 G W Hinchee.....1415 West 34 St  
 A C Hirshfield.....407 Medical Arts Bldg  
 J R Holliday.....805 Medical Arts Bldg  
 R M Howard.....1103 Medical Arts Bldg  
 C A Howell.....1st Natl Bldg  
 B R Hunter.....804 Medical Arts Bldg  
 George Hunter.....400 East 3d St  
 Leon Janco.....10 West Park Pl  
 W J Jolly.....815 Medical Arts Bldg  
 John F Kelly.....American Bldg  
 Stratton E Kernodle.....119 West 5th St  
 John F Kuhn.....1101 Medical Arts Bldg  
 Everett S Lain.....701 Medical Arts Bldg  
 George A LaMotte.....Colcord Bldg  
 William Langsford.....1st Natl Bldg  
 N E Lawson.....401 Medical Arts Bldg  
 Clarence E Lee.....Equity Bldg  
 Elizabeth Lehmer.....132 West 4 St  
 A R Lewis.....Shops Bldg  
 W P Lipscomb.....1206 Medical Arts Bldg  
 LeRoy Long.....Colcord Bldg  
 LeRoy D Long.....Colcord Bldg  
 T R Longmire.....322½ No Broadway  
 R E Looney.....1201 Medical Arts Bldg  
 R S Love.....601 Medical Arts Bldg  
 Dick Lowry.....1108 Medical Arts Bldg  
 Tom Lowry.....1108 Medical Arts Bldg  
 R S MacCabe.....1st Natl Bldg  
 J C Macdonald.....301 West 12 St  
 J T Martin.....1105 Medical Arts Bldg  
 J H Maxwell.....402 Medical Arts Bldg  
 Earl D McBride.....210 West 10 St  
 J P McGee.....Elks Club Bldg  
 D D McHenry.....604 Medical Arts Bldg  
 J R McLaughlin.....223 West C St  
 Phil M McNeill.....912 Medical Arts Bldg  
 J F Messenbaugh.....Colcord Bldg  
 W H Miles.....City Hall Bldg  
 Ellis Moore.....Shops Bldg  
 L J Moorman.....912 Medical Arts Bldg  
 M V Moth.....American Bldg  
 John Z Mraz.....301 West 12 St  
 Raymon L Murdoch.....1017 Medical Arts Bldg  
 Elmer R Musick.....1216 Medical Arts Bldg  
 Ralph E Myers.....St Anthonys Hospital  
 L A Newton.....709 Medical Arts Bldg  
 N R Nowlin.....Colcord Bldg  
 D D Paulus.....301 West 12 St  
 Grider Penick.....Colcord Bldg  
 J R Phelan.....Security Bldg  
 A S Phelps.....1010 Medical Arts Bldg  
 John S Pine.....716 Medical Arts Bldg  
 J M Postelle.....947 West 13 St  
 Carroll M Pounders.....1105 Medical Arts Bldg  
 John A Reck.....Colcord Bldg  
 Horace Reed.....912 Medical Arts Bldg  
 Lea A Riely.....911 Medical Arts Bldg  
 John W Riley.....119 West 5th St  
 John A Roddy.....116 West 5th St  
 M M Roland.....705 Medical Arts Bldg  
 J B Rolater.....Shops Bldg  
 F E Rosenberger.....Security Bldg  
 Guy B Ross.....Equity Bldg  
 W W Rucks.....301 West 12 St  
 L M Sackett.....American Bldg  
 A L Salomon.....1108 Medical Arts Bldg  
 A J Sands.....American Bldg  
 F M Sanger.....Cotton Exchange Bldg  
 Winnie M Sanger.....Cotton Exchange Bldg  
 H V L Sapper.....902 Medical Arts Bldg  
 Millington Smith.....Colcord Bldg

L J Starry.....912 Medical Arts Bldg  
 Marvin E Stout.....1212 Medical Arts Bldg  
 S Ernest Strader.....American Bldg  
 S P Strother.....505 Medical Arts Bldg  
 Elijah S Sullivan.....Colcord Bldg  
 George H Tabor.....American Bldg  
 C B Taylor.....1002 Medical Arts Bldg  
 W M Taylor.....1st Natl Bldg  
 C W Tedrowe.....American Bldg  
 H Coulter Todd.....Colcord Bldg  
 Cary W Townsend.....814 Medical Arts Bldg  
 Henry H Turner.....907 Medical Arts Bldg  
 E L Underwood.....1st Natl Bldg  
 Ernest R Vahlberg.....Shops Bldg  
 Frank R Vieregge.....604 Medical Arts Bldg  
 Curt von Wedel.....Colcord Bldg  
 Theodore G Wails.....902 Medical Arts Bldg  
 W J Wallace.....Shops Bldg  
 J C Warmack.....Colcord Bldg  
 Marshall W Weir.....Colcord Bldg  
 Eva Wells.....712 Medical Arts Bldg  
 Walter W Wells.....712 Medical Arts Bldg  
 A K West.....Terminal Bldg  
 W K West.....Terminal Bldg  
 L M Westfall.....1005 Medical Arts Bldg  
 Arthur W White.....Shops Bldg  
 Arthur A Will.....Shops Bldg  
 H M Williams.....1017 Medical Arts Bldg  
 Ennis C Wilson.....1102 Medical Arts Bldg  
 Kenneth J Wilson.....1017 Medical Arts Bldg  
 Earl L Yeakel.....1211 Medical Arts Bldg  
 Antonio D Young.....1103 Medical Arts Bldg  
 A M Young.....Colcord Bldg

## OKMULGEE COUNTY

Lin Alexander.....Okmulgee  
 R M Alexander.....Bryant  
 J E Bercaw.....Okmulgee  
 I W Bollinger.....Henryetta  
 H D Boswell.....Henryetta  
 Harry E Breese.....Henryetta  
 W W Brooks.....Henryetta  
 E C Byram.....Okmulgee  
 M D Carnell.....Okmulgee  
 W M Cott.....Okmulgee  
 R J Crabill.....Allen  
 A H Culp.....Beggs  
 J G Edwards.....Okmulgee  
 F S Etter.....Beggs  
 James B Ferguson.....Okmulgee  
 M B Glismann.....Okmulgee  
 O O Hammonds.....Okmulgee  
 T A Hartgraves.....Okmulgee  
 A R Holmes.....Henryetta  
 F A Howell.....Okmulgee  
 W S Hudson.....Okmulgee  
 Albert G Hughey.....Dewar  
 Garnett A Kilpatrick.....Henryetta  
 J O Lowe.....Okmulgee  
 Thomas J Lynch.....Okmulgee  
 J C Matheney.....Okmulgee  
 J D McGovern.....Morris  
 G Y McKinney.....Henryetta  
 J A Milroy.....Okmulgee  
 J L Miner.....Beggs  
 C M Ming.....Okmulgee  
 W C Mitchener.....Okmulgee  
 Hugh H Monroe.....Lindsay  
 Richard Mooney.....Henryetta  
 J H Neal.....Beggs  
 F L Nelson.....Okmulgee  
 J P Nelson.....Shulter  
 J H Powell.....Kusa  
 H L Rains.....Okmulgee  
 D M Randel.....Okmulgee  
 Harvey Randel.....Okmulgee  
 J C Rembert.....Okmulgee

I W Robertson.....	Henryetta	B W Ralston.....	Cardin
J C Robinson.....	Henryetta	W A Sibley.....	Cardin
E D Rodda.....	Okmulgee	Ira Smith.....	Commerce
F E Sadler.....	Henryetta	William B Smith.....	Miami
W C Sanderson.....	Henryetta	G W Taylor.....	Cardin
Thomas H Shelton.....	Okmulgee	L W Troutt.....	Afton
N N Simpson.....	Henryetta	G O Webb.....	Cardin
W W Stark.....	Okmulgee	F L Wormington.....	Miami
W L Stephenson.....	Henryetta		
L B Torrence.....	Okmulgee		
W C Vernon.....	Okmulgee		
J O Wails.....	Morris		
V Wallace.....	Morris		
F S Watson.....	Okmulgee		
W S Watson.....	Okmulgee		
R L Westover.....	Okmulgee		
C C Whittle.....	Henryetta		
L B Windham.....	Okmulgee		

## OSAGE COUNTY

William H Aaron.....	Pawhuska
E T Alexander.....	Barnsdall
Robert J Barritt.....	Pawhuska
J V Blair.....	DeNoya
Claude S Chambers.....	Burbank
W W Chase.....	Barnsdall
T J Colley.....	Hominy
C H Day.....	Pawhuska
B E Dozier.....	Lyman
F R First.....	Barnsdall
G W Goss.....	Pawhuska
C H Guild.....	Apperson
J T Gunter.....	Avant
O R Gregg.....	Pawhuska
M D Henley.....	Osage
Matthew Karasek.....	DeNoya
E N Lipe.....	Fairfax
C K Logan.....	Hominy
H B McFarland.....	Cleveland
I C Morris.....	Shidler
M E Rust.....	Pawhuska
D A Shoun.....	Canon City Colo
J G Shoun.....	Fairfax
Benjamin Skinner.....	Pawhuska
A J Smith.....	Pawhuska
G E Stanbro.....	Pawhuska
B F Sullivan.....	Barnsdall
H L Summers.....	Osage
Roscoe Walker.....	Pawhuska
Leonard C Williams.....	Pawhuska
E K Witcher.....	Pawhuska
Divonis Worten.....	Pawhuska

## OTTAWA COUNTY

E Albert Aisenstadt.....	Picher
William H Black.....	Picher
J O Bradshaw.....	Welch
R F Cannon.....	Miami
G W Colvert.....	Miami
D L Connell.....	Picher
A M Cooter.....	Maimi
M M DeArman.....	Miami
G A DeTar.....	Miami
William M Dolan.....	Picher
J B Hampton.....	Commerce
R H Harper.....	Afton
J C Jacobs.....	Maimi
J S Jacoby.....	Commerce
J M Lanning.....	Picher
E A Leisure.....	Afton
J B Lightfoot.....	Miami
E D Mabry.....	Hockerville
Charles McCallum.....	Quapaw
C A McLelland.....	Miami
G P McNaughton.....	Miami
H K Miller.....	Fairland
I Phillips.....	Picher
G Pinnell.....	Miami

## PAWNEE COUNTY

W E Arnold.....	Jennings
C W Ballaine.....	Cleveland
C A Beeler.....	Maramec
C E Beitmen.....	Skedee
J R Fleming*.....	Keystone
J Worrall Henry.....	Pawnee
D J Herrington.....	Terlton
G H Phillips.....	Pawnee
J A Roberts.....	Cleveland
E T Robinson.....	Cleveland

## PAYNE COUNTY

J E Adams.....	Cushing
C W Bates.....	Choteau
C H Beach.....	Glencoe
I A Briggs.....	Stillwater
James H Cash.....	Stillwater
L A Cleverdon.....	Stillwater
W N Davidson.....	Cushing
Benjamin Davis.....	Cushing
E M Harris.....	Cushing
R W Holbrook.....	Perkins
J Walter Hough.....	Cushing
W B Hudson.....	Yale
Thomas A Love.....	Ripley
H C Manning.....	Cushing
John A Martin.....	Cushing
E G Newell.....	Yale
Will H Payne.....	Picher
P M Richardson.....	Cushing
C E Sexton.....	Stillwater
Ralph E Weller.....	Electra Texas
L R Wilhite.....	Perkins

## PITTSBURG COUNTY

V H Barton.....	McAlester
J B Bright.....	Kiowa
A D Bunn.....	Savanna
F J Baum.....	McAlester
Charles J Brunson.....	McAlester
H N Bussey.....	Pittsburg
A E Carlock.....	Hartshorne
T S Chapman.....	McAlester
Roy C Cochran.....	McAlester
W A Daniels.....	No. McAlester
J E Davis.....	McAlester
Joe Dorrough.....	Indianola
J W Echols.....	McAlester
L E Gee.....	Savanna
W C Graves.....	McAlester
A Griffith.....	McAlester
J O Grubbs.....	No. McAlester
W P Hailey.....	Haileyville
Charles T Harris.....	Kiowa
Ellen Hedrick.....	Mansfield, Ark
W K Hudson.....	Hartshorne
J C Johnston.....	McAlester
George A Kilpatrick.....	McAlester
L C Kuyrkendall.....	McAlester
W P Lewallen.....	Canadian
T H McCarley.....	McAlester
C A McMehan.....	McAlester
F A Miller.....	Hartshorne
J A Munn.....	McAlester
R A Munn.....	Kiowa
T T Norris.....	Krebs
J F Park.....	McAlester

\*Deceased



R K Pemberton.....	McAlester
W G Ramsay.....	Quinton
O W Rice.....	McAlester
W W Sames.....	Hartshorne
J C Schlicht.....	No. McAlester
H D Shankle.....	Hartshorne
Graham Street.....	McAlester
Will C Wait.....	McAlester
F L Watson.....	McAlester
J A Welch.....	McAlester
Clyde O Williams.....	McAlester
L S Willour.....	McAlester
McClellan Wilson.....	McAlester

## PONTOTOC COUNTY

N B Breckenridge.....	Laredo, Texas
J G Breco.....	Ada
Catherine Brydia.....	Ada
W A Bullock.....	Ada
S L Burns.....	Maxwell
R T Castleberry.....	Ada
John R Craig.....	Ada
Isham L Cummings.....	Ada
B B Dawson.....	Ada
W D Faust.....	Ada
T E Fuller.....	2300 So Center St Oklahoma City
T A Hill.....	Roff
J L Jeffress.....	Ada
Wilson H Lane.....	Ada
M L Lewis.....	Ada
Samuel A McKeel.....	Ada
M C McNew.....	Ada
H D Meredith.....	Ada
L M Overton.....	Ada
S M Richey.....	Francis
F C Rose*.....	Allen
S P Ross.....	Ada
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### TETANUS NOT HOPELESS

While prevention is, beyond all question, better than cure, and has long been considered the only hope in cases of tetanus, a change is coming over the medical mind in respect to the value of antitoxin after the symptoms of tetanus have made their appearance. No longer regarded as useless, the urge is to make the dose adequate, 10,000 to 20,000 units at least, and in the vein or the spinal cord. Some striking cures have been reported from these large doses, followed up by smaller daily hypodermic injections to maintain the antitoxic effect.

Tetanus Antitoxin, P. D. & Co., is recognized everywhere as a standard product, and is available in doses ranging from 1500 units (for prophylaxis) to 10,000.

Literature on Tetanus Antitoxin and on Chloretone (chlorbutanol), a chemical compound that is given in large doses per rectum to control the muscular spasm of tetanus while the Antitoxin is given for its specific effect, is offered by Parke, Davis & Co., whose advertisement appears elsewhere in this issue.

### IF YOU ARE TROUBLED WITH ANTS, TRY THIS

As an effective poisonous bait for ants, moisten a sponge or a piece of bread with syrup made by dissolving an ounce of sugar and ten grains of arsenate of soda in two ounces of hot water.

Some ants may even carry the poisoned liquid back to the nest, resulting eventually in the destruction of the entire colony.

The employment of this effective bait, if used with care, may replace the applications of the many insecticidal preparations, which, practically on account of the odor they impart, cannot be conveniently employed.—Hygeia.

A six year old hospital patient full of pain and distress after an appendicitis operation said, when the nurse had cooled his hot little face and his hands with a cool moist cloth: "Now wash my pain."—Hygeia.

Children are not subject to freckles before the fourth year of life. Freckles appear along about the years when their absence would best fit the social requirements of our race and climate.—Hygeia.

### WARNS AGAINST RETURN OF OLD TIME JULY 4TH

Are we to return to the old-time Fourth of July with its deafening noises and its inevitable casualties.

Many persons whose patriotism emphasizes itself chiefly in noisy lawlessness are advocating its return. Hygeia, popular health magazine, warns against this.

In five Fourth of July celebrations in the United States from 1903 to 1907, there were 1,153 persons killed and 21,520 injured. A campaign of education, in which the American Medical Association was an active agent by its publication of death and accident statistics, has brought about the safe and sane celebration. Hygeia asks that there be no return to the unnecessary mutilations and deaths by lockjaw of a few years ago.

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# THE JOURNAL

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## DIARRHEA IN INFANTS FROM THE STANDPOINT OF THE GENERAL PRACTITIONER\*

CATHERINE BRYDIA, M.D.  
ADA

The things that should concern the practitioner most, when confronted with a case of Diarrhea are, First, determine the etiological category into which the case comes, and Second, should view all the methods of treatment.

Since we know that more children die the first two years of life with Diarrheal diseases, than all other diseases combined, we can appreciate the importance of the general practitioner having a greater understanding and clearer picture of the disease.

The recent advances in Physiological Chemistry and Bacteriology and infant feeding with the systematic study of cases, have thrown new light upon infantile diarrhea, and furnished new indications for treatment.

For convenience, we will divide cases into the following clinical group.

*Nervous Diarrhea.*

*Food Intolerance or Food Injury.*

*Infection*, and we might add underfeeding, or starvation diarrhea.

There is no sharp line of differentiation of groups. Types shade one into another.

The points of general agreement are bad hygiene, bottle feeding and the influence the external heat has in promoting the disease.

*Nervous Diarrhea* is apparently caused by an increased reaction of the nerves to the stimuli which produces peristalsis and an increased intestinal secretion. As a result, the food is passed more or less unchanged. Holt speaks of these infants as the Hypertonic type. Such infants should be kept quiet, with no excitement or unnecessary handling.

*Food Injury* is classified by L. T. Rayster under three headings:

1st—Acute, in which proper food is given but the intestinal tract is overloaded.

2nd—The accidental administration of an excess of one or more food elements, either fat, sugar or protein.

3rd—Food injuries (chronic).

A child with a beginning intolerance for one of the food elements will eventually acquire an intolerance for all others if the elemental portion is not regulated in time.

Diarrhea caused by too much fat and sugar make up the greater portion of our summer diarrheas in children.

Protein diarrheas are rare in infancy.

The Diarrheas just mentioned are the result of decomposition of foods in the gastro intestinal tract, and there are no anatomical lesions.

*Infectious Diarrhea or Dysentery* is a specific infectious disease caused by a number of organisms, which may be primary or secondary to the above mentioned, due to the invasion of the intestinal walls by Bacteria whose life processes produce destruction of the mucosa. Anatomical lesions appear in the gastro intestinal tract. As a result of this condition large amounts of blood, pus, and masses of mucus and necrotic material appear in the evacuations.

Diarrhea from underfeeding is characterized by green and watery stools from the lowered functional capacity of the gastro intestinal tract, while the mucus is simply the result of excessive peristalsis. These cases improve rapidly with proper feeding.

*Symptoms.*

The number of stools passed in twenty-four hours may be as many as ten to thirty. The stools are hurried through so rapidly that water is not absorbed. The sugars are rushed along so fast that they are not completely broken down and assimilated. Thereby much gas is formed, the stools are acid and excoriate the buttocks.

\* Read before the Section on Obstetrics and Pediatrics, Annual Meeting, Oklahoma State Medical Association, Tulsa, May 12, 13, 14, 1925.

The fats are broken down, liberating the lower fatty acids, which are extremely irritating to the gastro intestinal tract, producing watery stools.

The end product of proteid decomposition is putrefactive and intensely foul stools. The stools are not so numerous and the temperature is not so high. The reaction of the stool is alkaline. A point in differential diagnosis between a fat and proteid curd is that the former will dissolve in ether and the latter will not.

Unfortunately, the general practitioner is rarely called in the first disturbances. The mother usually thinks that teething produces a diarrhea and resorts to daily doses of calomel and castor oil, without placing any importance on the diet.

The doctor is called in the fermentative or toxic stage. The first, or restless stage, is replaced by drowsiness, eyes half closed, persistent temperature, frequent watery stools, consisting of mucus, tinged with blood, tenesmus and prolapse.

The conditions most to be feared are toxemia and dehydration. The loss of water causes blood concentration, failure in urinary secretions, and acidosis. These cases show signs of collapse, with deep sighing respiration, air hunger, eyes sunken, face pinched looking, rapid pulse, and in severe cases convulsions and meningitic symptoms, with even Cheyne-Stokes respiration.

#### *Treatment*

Prompt treatment necessary and consists of the following points: Rest, food correction, eliminating toxemia, preventing dehydration, and medical.

*Rest.* Keep the baby in cool part of house with fresh air. Avoid unnecessary handling. Do not expose to hot sun during the day or chilly night air. Light clothing during the day, and a shirt to keep stomach and abdomen warm at night.

*Food Correction.* Most difficult problem for the general practitioner. The Pediatrician can devote more time and he is usually better equipped for making physiological and chemical test and has hospital and trained nurses at his command, while the rural cases fall into the hands of the general practitioner, who is forced to take heroic measures and do radical treatment under difficulties.

The infant should be put on starvation period for 12 to 24 or 36 hours, the time depending on the condition of the child. Water should be given freely. The starvation period may help to make the diagno-

sis by allowing the gastro-intestinal tract to empty itself of such food materials as may be serving as culture media for Bacteria. In a case where improper feeding in the cause, this starvation period also gives the gastro-intestinal tract a rest, relieving a part of the exaggerated peristalsis. The next thing is to get food which can be used immediately, and one which the baby can tolerate.

As the majority of these infants are suffering from both fat and carbohydrate, the ideal food would be one high in proteid. This would change the intestinal flora from a fermentative acid state to a putrefactive alkaline state. Eiweissmilch's protein milk fills this requirement. This preparation is made by separating the whey from the curd, breaking the curd by putting it through a fine sieve and adding it to buttermilk.

It is not good policy to deprive an infant of carbohydrates for too long a period, increasing the amounts of sugars that are difficult to ferment. Dextri-Maltose or corn syrup should be used. These sugars when added in small amounts are rapidly absorbed and thus the glycogen reserve of the body is brought back up, and nutrition and resistance is kept up. The more severe the diarrhea the more slowly we raise the sugar.

Diarrhea in breast fed babies is uncommon and rarely fatal. If breast milk can be procured from a healthy woman, it is always the safest diet.

The toxins are eliminated by stopping all food and evacuating the stomach and bowels. This may be done by washing the stomach with a sodium bicarbonate solution, and washing to colon twice daily with a sodium or saline solution.

*Dehydration* should not be allowed to occur. Give water by mouth as near the temperature of the body as possible. The intake of liquids must be watched for the amount of water loss due to frequent stools is much greater than usually estimated from the number and amount passed, because of water being absorbed by the diapers.

If water is not taken well by mouth, give normal saline subcutaneously at a temperature of 105 degrees Fahrenheit, about 3 to 6 ounces at a time at intervals of 5 to 6 hours. The intraperitoneal route is a safe, quick and easy method of combating toxemia and loss of fluid. Use normal saline or Ringers solution, giving 150 to 400 C. C. It is absorbed quickly



and may be repeated two or three times daily.

*Drugs* play a small part in treatment. They are sometimes valuable and many times harmful. An initial dose of castor oil or some other light cathartic may be given in a case where it is known that the baby has eaten something that will be harmful, but when the diarrhea is severe the gastro intestinal tract will usually empty itself, and as a rule cathartics are too often used indiscriminately.

In persistent vomiting after stopping the food, paregoric in doses of 10 to 30 minims and repeat after each emesis will not only relieve the vomiting and diarrhea, but acts as a stimulant which is perhaps due to the camphor.

Bis-subcarbonate is perhaps valuable in some cases, given in doses 10 to 20 grs.

In severe cases of infectious diarrhea with tenesmus and prolapse, morphine given hypodermatically in grs. 1-100 to 1-60 most valuable of all drugs.

*Hyperpyrexia.* The temperature should be controlled by water. By giving plenty to keep up the body fluids and to dilute the toxins and externally by packs about 80 degrees F. This not only relieves the Hyperpyrexia, but relieves the nervous symptoms as well.

Colon irrigation also valuable.

#### *Conclusions:*

1st. Prophylaxis—most essential by properly proportioned food elements.

2nd. Early attention in state of first disturbances by withdrawing food and producing rest.

3rd. Preventing dehydration by keeping up the body fluids.

4th. Opium in some form when indicated in severe cases.

### LACTIC ACID MILK IN ARTIFICIAL FEEDING\*

C. V. RICE, M.D.  
MUSKOGEE

The artificial food for the infant should be cow's milk and it is seldom that we find a baby that has an idiosyncrasy for it. As a rule, the failure to gain in weight is not due to the cow's milk but to the modification.

Artificial feeding may be accomplished successfully in a number of ways if certain fundamental conditions are fulfilled. These requisites are as follows:

The food must be sufficient to cover the caloric demands,—protein, carbohydrate, fat, mineral salts, water, pigment and vitamins A. B. C. and D. It must also be digestible and free from harmful bacteria. When any of these requisites are neglected the infant will not develop normally. He must be given a sufficient amount for tissue growth, heat and energy.

The first step to be taken in finding the amount of food for twenty-four hours is to find the caloric requirements for the child. As the normal infant requires 45 calories per pound, his given weight is multiplied by 45. The amount of whole cow's milk necessary for twenty-four hours feeding is determined by multiplying the weight of the child by 1½ ounces. Premature, or under-fed infants may require two or three ounces per pound. Additional fluids must be added to the whole cow's milk to bring the total volume to the amount normally taken by the breast fed infant. Water is used as a diluent during the first two or three months of life and from then until the sixth month a 3 per cent cereal water; after the sixth month a 6 per cent to 8 per cent cereal gruel. For a single feeding, the additional amount of fluids necessary to add to the cow's milk may be determined by giving it two ounces more than the number of months old and this, in turn, multiplied by the number of feedings in twenty-four hours, will give the total ounces of milk and water. The milk subtracted from the total mixture is the amount of water to be added.

#### Example:

Baby 2 months old,  
Weight, 10 pounds.  
X 1½ ounces of milk equals  
15 oz. of cow's milk for 24 hours.  
Age 2 months,  
+ 2 ounces more of milk mixture than  
number of months (2 mos.) equals  
4 ounces.  
X 6 feedings in 24 hours equals  
24 ounces.  
Less 15 oz. of cow's milk equals  
9 oz. of diluent.

We will now briefly consider the elements of milk which are so important for the proper development of the child.

\* Read before the Section on Obstetrics and Pediatrics, Annual Meeting, Oklahoma State Medical Association, Tulsa, May 12, 13, 14, 1925.

Protein is one of the most important elements of milk and is essential for cell construction and replacement of nitrogenous waste.

Mineral salts are furnished in abundance in both mothers' and cows' milk. There are more Cal. Mg. and Phos. present in cow's milk than in breast milk. With the calculation of  $1\frac{1}{2}$  ounces of cow's milk to the pound weight of the infant, there are sufficient amounts of protein, salts and fat to carry on their important function—growth.

Fats are not of as much importance as protein and the deficiency can be made up with sugar. The fat of cow's milk is less completely absorbed and is more likely to produce gastro-intestinal irritation than the fat of breast milk.

The infant gains more rapidly when he receives a fair amount of sugar in his diet and it also increases the caloric value of the food. The sugar selected should be Dextrin-Maltose or cane sugar. The amount added for the twenty-four hours is  $\frac{1}{2}$  ounce the first two weeks of life, then 1 to  $1\frac{1}{2}$  ounces up to the third month and after three months,  $1\frac{1}{2}$  to 2 ounces.

Buffer is the capacity to absorb a larger amount of acid or alkali without significant chemical reaction. The buffer reaction is much higher in cow's milk than in breast milk and about three times as much acid is necessary to bring cows' milk to the same degree of acidity as in breast milk. This fact is important to remember in infant feeding.

Boiled milk is much more easily digested by infants than raw or pasteurized milk and is less likely to lead to digestive disturbances. The only vitamine destroyed by boiling the milk is the anti-scurbutic vitamine and it can be supplied by the addition of orange juice or tomato juice to the diet. Constipation and diarrhea is much less frequent.

Milk with a high bacterial count does not always lead to disease as they may be of the harmless varieties; however, it may contain those types that cause serious gastro-intestinal disease and for this reason milk should be boiled and in so doing all toxic bacterial products are destroyed.

The vitamins A and D fat soluble may be supplied by adding cod liver oil to the

diet. Vitamine A aids growth and D prevents rickets.

With all the requisites mentioned and the following figures to be used as a basis for calculation, one may expect 80 per cent of artificially fed babies to thrive on sweet milk mixture.

Calories per ounce

Whole milk .....	20
Sugar .....	120
3 per cent barley water.....	3
6 per cent barley water .....	6

Example:—Baby five months old, wt. 15 pounds—

Number of calories required is 45 calories times 15, equals 675 calories.

Amount of cows' milk required is  $1\frac{1}{2}$  oz, times 15, equals 22 ozs.

Amount of mixture is 2 ounces plus 5, equals 7 ozs. each feeding.

Amount of mixture in 24 hours is 7 ozs. times 5 feedings, equals 35 ozs.

35 ozs. of mixture, minus 22 ozs. of milk equally 13 ounces diluent.

Amount of sugar required is  $1\frac{1}{2}$  ozs.

Whole milk 22 ounces X 20 cal. per oz. equals 440 calories.

6 per cent barley water 13 ozs. X 6 cal. per oz, equals 78 cal.

Sugar  $1\frac{1}{2}$  oz. X 120 calories equals 180 calories.

Total 698 calories.

The amount of calories is a little more than required for his age and weight but in round numbers is all right.

Now, if only 80 per cent of babies will thrive on such a mixture, we have 20 per cent that must be given some other feeding. This is where Lactic Acid milk plays the important part. Milk of this type is especially suitable for infant feeding, due to the freedom from harmful bacteria and its low buffer value as a considerable portion of its buffer substance is neutralized by the acid produced. Infants are able to take much larger quantities of Lactic Acid milk than sweet milk, and it is the most satisfactory form of infant feeding.

It may be produced by two methods: Artificial souring of milk by acid producing organisms, or by the direct addition of Lactic Acid to sweet milk. The former method is by adding a culture of the Bulgarian Bacillus or Bacillus Acidophilous, or Lactic Acid Bacillus to sweet sterilized milk, and this is put in a warm place for about twelve hours. At the end of this time the casin is partly precipitated in the form of a fine, flocculent curd. Milk



prepared in this manner can usually be obtained from dairies and it is more advisable to do this than to make it in the home.

The second method is the one that is recommended by Merriott for preparing Lactic Acid milk in the home. Lactic Acid U. S. P. (75 per cent or 85 per cent) is added directly to fresh, clean milk that has been boiled for five minutes, cooled, made cold, and the scum removed. Three-fourths teaspoonful of Lactic Acid is added slowly, drop by drop, to one pint of the cold milk and the milk stirred slowly after each drop. If this is done slowly and there is a continuous stirring, a smooth homogeneous preparation can be expected. The concentration of acid, the taste and the general physical properties are the same as that occurring in ordinary buttermilk. Carbohydrates are now added to the mixture, and this may be either Dextrin-Maltose or Blue Label Karo Syrup. The amount depends upon the condition and the age of the child, but never less than one ounce in a 24-hour mixture. With no other milk modification can a baby take so large an amount of sugar without any bad effects and really gain as he can with Lactic Acid milk. In fact, it seems as if there is no limit to the amount of Karo Syrup that can be added with no ill effect to the infant.

Of the 20 per cent mentioned, there are a few who will not do well on Lactic Acid milk and we find that these few will not do well on any food. This is due to some physical condition of the child as a congenital defect or an infection. When one comes in contact with an infant of this type he should not blame the diet and change from one food to another, but should look for such conditions as Syphilis, Congenital Heart, Tuberculosis, Pyelitis, Otitis Media, or Mastoiditis. If any of these are found and relieved, the expected gain will be made with Lactic Acid milk.

With Pyloric Stenosis, you can feed more calories with Lactic Acid milk and the infant will stand a better chance of overcoming the condition without an operation than with any other food. Ten per cent barley flour is added to the milk which makes a very thick mixture, and it cannot be vomited. With the addition of the barley flour the Lactic Acid milk may be boiled without forming a big, solid curd, but without the flour it should not be heated above body temperature. This thick mixture may be fed through a

large hygeia nipple which has the end cut off. The food is placed in the nipple with a spoon and pushed through with a glass rod. If the infant is unable to swallow it, you can use a glass syringe—about a 4-ounce size. Place the mixture in the syringe, insert a small catheter in the stomach, through the mouth, connect the syringe and pushing the plunger, the baby is fed. In non-operative cases, the vomiting not only subsides, but the baby gains in weight as he is getting the required number of calories.

The advantages of Lactic Acid Milk:

1. Inhibits bacterial growth.
2. It does not require refrigeration.
3. May be taken in large quantities with less risk of gastro-intestinal disturbances.
4. It is possible to add more sugar than to sweet milk without disturbing digestion.
5. A large portion of the buffer substance of milk is neutralized by the acid.
6. It is a better hot weather food for infants as it does not cause diarrhea or vomiting.
7. Premature infants may be fed with good results.
8. It is easily prepared in the home and on the whole it is the most ideal food that can be used in artificial feeding of the normal or sick infant.

#### DIET REQUIREMENTS OF THE INFANT\*

C. W. ARRENDELL, M.D.  
PONCA CITY

The food requirements of artificially fed infants may be taken as approximately the same as that of breast fed infants of the same age and weight. Even though the metabolism of breast fed infants is maintained more economically, it must be remembered that the breast fed infant is able to stand a considerable amount of over-feeding which in the artificially fed would result in injury.

In estimating the result of feeding, increase in weight remains the most important index during the first months of life. The great majority of dietary dis-

\* Read before the Section on Obstetrics and Pediatrics, Annual Meeting, Oklahoma State Medical Association, Tulsa, May 12, 13, 14, 1925.

turbances of the infant can be simplified on a basis of whether it is getting too little or too much food. Consequently, the frequent use of scales before and after feeding will correct many erroneous ideas, such as: Crying as need for more food; green stools or diarrhea, for castor oil and starvation; vomiting as caused by bad milk, teething or worms; and many other ingenious deductions of antiquity that are still advanced as scientific by many present day physicians. However, beside the actual gain in weight it becomes of equal importance to recognize the steadiness of the gain, the muscular tone, the vigor, color, bone development, adequate sleep, good disposition and the regularity of the bowels and bladder.

In the application of any rules for feeding of infants, it must be remembered that each infant must be fed to meet its individual and peculiar requirements. Breast milk being the food originally intended for all infants the idea that it is poisonous or poor in quality is to be discouraged. Everything else being equal, for successful nursing the proper quantity of breast milk at the proper interval with a little sunshine and lots of restraint on the part of those in attendance is the sole and absolute requirement. It might be well to add that Marriott has pointed out that a baby doing poorly at the breast will usually do worse if entirely weaned and put on a bottle.

However, if after mature consideration, it is found necessary to give the baby food other than breast milk, there should be no guesswork in selecting this food. It will be admitted that the methods of feeding that have been and still are in vogue have been more or less successful, though too often wrought with failure, because strict attention was not given to all the fundamental requirements as a group. The caloric method stressed the importance of enough calories but neglected other essential requirements. The simple dilution method is to be commended but in this method very often the calories or proteins or other essentials are insufficient. The same may be said of the percentage method and the concentrated feeding method, as well as all other methods which have not been broadened to take in all the requirements that must be met in fitting a diet that will be as successful as humanly possible. These requirements as advocated by Marriott, involve several details yet are so simple and so practical that almost universal success can be assured. As has

been stated an infant may be successfully fed in a number of ways but the highest degree of success will be attained only when all fundamental conditions are fulfilled. The requirements of such a food must:

1. Be sufficient to cover the caloric demands.
2. Supply at least a certain minimal amount of protein, carbohydrate, mineral salts, water and vitamins A, B, C, and D.
3. Be capable of digestion.
4. Be free from harmful bacterial contamination.

In terms of caloric value a normal infant will require a diet containing not less than 100 calories per kilogram of body weight every twenty-four hours. This is used as follows; 60 calories for maintaining body functions while at rest or the basal metabolic rate; 20 calories for exercise or work; 15 calories for normal growth, and 5 calories as waste.

Infants who are underweight require the same amount of total food per day as those who are normal in weight, although this amount may be considerably more than 100 calories per kilogram of body weight. For example, a normal infant six months of age, weighing 7 kilograms requires approximately 700 calories per day. An undernourished infant six months of age weighing 4 kilograms would also require very close to 700 calories per day and this would mean 175 calories per kilogram. In the case of overweight infants the converse is true. The fat infant has a lower food requirement per kilogram of body weight. This is probably due to the fact that fat is a relatively inert tissue acting very much like an overcoat and requiring very little energy for its maintenance. The thin and the fat infant may have approximately the same amount of active muscular tissue and the same size heart and lungs and although their total body weights are very different it is the active protoplasmic tissue of the body which determine the food requirements rather than the actual weight.

The final test of the adequacy of the diet is the response on the part of the infant. It is often necessary to give food of a considerable higher caloric value than would be anticipated. Most failures in infant feeding are due to failure to supply sufficient calories to meet the infants requirements. And unless the energy require-



ments can be met, the infant will fail to do well even though the food may be easily digestible and otherwise perfect in composition. Thus it is important that the caloric value of the food be calculated in every instance to avoid gross errors of under feeding and over feeding.

Infants are not usually able to digest as large an amount of cow's milk as of human milk. This difference is explained by the fact that cow's milk has the capacity to bind chemically large amounts of acid, that is to say has a high "buffer" value as compared with breast milk. Approximately three times as much acid must be added to cow's milk as to breast milk in order to bring the free acidity of the resultant mixture to the same point. The continued feeding of cow's milk to infants leads ultimately to a somewhat increased secretion of acid in the gastric juice. In general however, the acidity of the stomach contents is less than the optimum when sweet cow's milk is fed. Dilution is the customary means of reducing the total amount of cow's milk in a formula. Thus dilution reduces the amount of buffer substance in the whole formula which makes it possible for the infant to digest the food. Very often, however, the dilution must be carried to such a point as to make it impossible for the formula to contain enough calories to satisfy the demands of the baby. Then if enough sugar is added to fulfill the calorie requirement the total amount of protein is too low which causes diarrhea and other troubles to result.

The average infant will require a minimum of 1.5 grams of protein in twenty-four hours per kilogram of body weight though twice that amount is the suitable protein ration. This amount of protein is available when 100 grams of cow's milk per kilogram of body weight is given.

The optimum amount of carbohydrate required during infancy is about 10 grams per kilogram of body weight in twenty-four hours. It has been observed that an infant will take larger amounts of sugar when a mixture of sugar is fed than when a single sugar is given. The explanation is that intestinal bacteria capable of fermenting one form of sugar may not ferment others as well. For the same reason an infant with digestive disturbances is often benefited when one sugar is substituted for another in its diet. Starch does not readily ferment in the intestinal tract and is therefore a valu-

able food for infants with digestive disturbances and many infants begin to gain weight when a small amount of starch is added who do not gain when the same amount of calories in other forms are added. The combination of sugar best fitted for routine feeding is found in corn syrup or blue label Karo which has the composition of 55 per cent dextrin, 30 per cent maltose, 15 per cent glucose and therefore does not readily ferment. It has the additional advantage of being cheaper in price than most other sugars. One-half ounce is the amount added to the diet during the first two weeks; one to one and a half ounces added up to 3 months of age; after which one and one-half to two ozs. are given. After the age of nine or ten months addition of this much sugar is not generally necessary, as carbohydrates are supplied more in the form of cereals. It should be observed that when the diet is high in sugar the protein should be proportionately increased.

There is ordinarily no need for the addition of extra mineral salts to the dietary of normal infants on either human or cow's milk, at least during the first few months of life. After six months the addition of iron is desirable and this can be accomplished by feeding of green vegetables or meat juices.

It has been demonstrated that animals cannot live on a mixture of pure protein, carbohydrate, fat and salt, even though all these may be present in adequate amounts and suitable proportion. These substances as yet unidentified which are essential to life and growth are known as Fat Soluble Vitamins A and D, and Water Soluble Vitamins B and C. To further complete the diet when cow's milk is used orange juice is always added at the age of six weeks or two months and cod liver oil in very small daily amounts is given routinely after three months of age. As breast milk does not supply sufficient water soluble vitamins, orange juice or tomato juice is added to the diet of breast fed infants at the second or third month. Breast milk is thought to be rich in fat soluble vitamins. At least experience proves that very few breast fed babies develop rickets. Consequently, cod liver oil is not necessary as it is when cow's milk is used entirely, though to be absolutely sure that neither the artificially fed nor the breast fed infant will not develop any signs or symptoms of rickets it should be emphasized that skin irradiation by direct exposure to the sun's rays

is as essentially necessary to the infant as it is to the proper growth and development of plant life. In the light of recent experiments of Harry L. Steenbock and Amy L. Daniels it would appear that irradiation of the breast fed infant occurs very readily through its intimate contact with the mother during nursing, whereas such contact is absent in the bottle fed baby. This may be the reason why artificially fed babies are more prone to develop rickets.

A normal infant thrives best when receiving from 100 to 150 grams of water per kilogram of body weight per day, whereas a normal adult usually requires not more than 30 to 40 grams per kilogram per day. The higher water requirements of the infant is to be explained on the basis of his higher rate of metabolism. Usually most of the infant's water intake is supplied in the breast milk or formula.

To insure the digestibility of a cow's milk formula usually depends on the total amount of milk used or in the reduction of the buffer substance. Normal digestion occurs only at a certain optimum degree of acidity. If the high buffer substance in sweet cow's milk soaks up all the Hydrochloric acid an infant can secrete before the optimum degree of acidity is reached then normal digestion cannot occur. Therefore lactic acid milk easily takes the premier position in its adaptability to all infants because of the reduction of the buffer substance. Experience shows that when necessary larger amounts of sugar may be added to lactic acid milk than to the ordinary dilutions of sweet milk without producing fermentation, diarrhea or vomiting. From the standpoint of protein requirement it is not always possible to give enough diluted sweet cow's milk whereas lactic acid milk easily furnishes the required amount.

All cow's milk should be boiled at least three minutes because this process absolutely insures that the formula is free from harmful bacteria. Boiling also makes the milk more easily digested and thus more completely absorbs, leaving less residue, which explains the reason for some relative constipation. Boiling may destroy some of the vitamins but since these are added routinely as stated above, we will surely do our infants a wonderful service to sincerely agree on the advantages of boiled milk, for then only can comparative safety from intestinal infections be insured.

To summarize the fundamental requirements of an infant's diet whether breast fed or artificially fed, must:

1. Be sufficient to cover the caloric demands.
2. Supply a certain minimal amount of protein, carbohydrate, mineral salts, water and vitamins, A, B, C, D.
3. Be capable of digestion.
4. Be free from harmful bacterial contamination.

## ETIOLOGY, DIAGNOSIS AND TREATMENT OF ACUTE OTITIS MEDIA\*

HOWARD S. BROWNE, M.S., M.D.  
PONCA CITY

Acute Otitis Media is a disease occurring at all times of the year, more often in children than adults, and many times neglected by the patients, the parents and even the physician. The seriousness of an "earache and running ear" is many times overlooked, and regarded as one of the minor and necessary evils of childhood.

*Etiology:* Among the remote causes of Otitis Media may be mentioned, (1) The season of the year, (2) The age of the patient, and (3) The type of the associated disease. David T. Smith<sup>(1)</sup>, in reviewing the records of over 600 cases finds that 47 per cent occurred during the month of February, and 23 per cent were found in July. In other words, more cases are found during the period of greatest susceptibility to colds, influenza, pneumonia and other diseases.

As to the effect of age upon the incidence of the disease he found that children between the ages of three and fifteen months are the most susceptible. It has always been known that otitis media occurs more frequently in some diseases than others. Pneumonia, dysentery, nasal diphtheria, pertussis and pyelitis, all show complicating otitis in 50 per cent or more of the patients according to Smith. Kaufman<sup>(2)</sup> states that influenza, pneumonia and measles are the most important general infections predisposing to this trouble. Local causes are infections confined to the upper respiratory tract, such as acute rhinitis and obstructive conditions. Anything that interferes with the proper ventilation of the nasopharynx and eusta-

\* Read before the Section on Eye, Ear, Nose and Throat, Annual Meeting, Oklahoma State Medical Association, Tulsa, May 12, 13, 14, 1925.



chian tubes is a direct or indirect causative factor.

Chronic general diseases, such as tuberculosis, syphilis, scurvy, diabetes and nephritis are often underlying conditions. Alden <sup>(3)</sup> states that "practically all suppurative processes of the middle ear arise as complications of acute or chronic inflammatory conditions of the upper respiratory tract, more particularly in the pharyngeal vault, and the path of infection from the pharynx to the ear is always the same, though the eustachian tube."

**Bacteriology:** Hemolytic streptococci are found in 50 per cent of cases. (1) *Staphylococcus aureus*, *B. Influenza*, *Pneumococcus* and mixed cultures containing three or more forms of bacteria are other specific causes. Boyd-Snee <sup>(4)</sup> in reviewing the causes in 285 persons varying in age from 6 months to 60 years, says that the "causal agents of the initial infectious process in the middle ear appear to have been pure streptococcus, the streptococcus in mixed strains, or mixed with other pyogenic cocci, (staphylococci and pneumococci) or bacilli influenza, pyocyanus and diphtheroids.

**Diagnosis:** First and foremost is the development of pain usually worse at night. It may be slight or excruciating. In a few cases pain is apparently absent. Tenderness can sometimes be found by pressure in front of the tragus and immediately below the lobe of the ear. In the acute infectious diseases with an absence of pain, the first sign may be a discharge. Significant symptoms in young infants are the attempt to get the hand up to the ear, and rolling of the head from side to side. Fever is practically always present and may vary in infants from 103 or 104 to 99.6 in older children. In adults fever may be absent.

In those cases of fever in infants in which no other cause can be found, the ears should be carefully examined. Many times otitis media is overlooked in young children for they are unable to tell where the pain is located. A good electric otoscope should be a part of every practitioner's armamentarium. Anyone can diagnose otitis media after the discharge begins, the important thing is to do it before nature ruptures the tympanic membrane, and thus irreparably injures the drum and causes the child to go through life with an open portal for infection

which flares up every time the moon changes.

**Treatment:** Given a case of acute otitis media, how should it be treated? Most all of us are agreed upon the value of an early paracentesis, and yet I wonder how often it is advised, judging from the large number of "running ears" where no such treatment was adopted. A great many times the ear is syringed, hot applications applied together with some phenol and glycerine drops, and the appearance of pus anxiously awaited. We overlook the fact that nature's perforation of the tympanic membrane is a tension rupture from the increased intratympanic pressure from the accumulation of inflammatory products, and that the hole made is unfortunately ragged and does not heal as readily as a clean well defined incision from the paracentesis knife. Moreover the increased pressure may have disseminated the pus into the mastoid cells with disastrous results to the patient.

"By early paracentesis efficient drainage can be established, the risk of the spread of infection into the mastoid cells lessened, and in the vast majority of cases, pain immediately relieved"—F. Holt Diggle. <sup>(5)</sup> In the hands of those accustomed to aural surgery it is an operation devoid of risks, and gives excellent results both as regards preservation of hearing and resolution of the infection.

What to do for the discharge following paracentesis or rupture of the ear drum is the next question. There seem to be as many remedies as there are those using them. I think we can all agree that the ear canal must be kept clean. The use of peroxide for softening the pus is advocated by many and is used by the writer with satisfaction. Some form of antiseptic wash to be used at home is also advisable. Personal daily cleansing by the physician with cotton swabs is almost a necessity for speedy resolution of these cases. The use of antiseptics to sterilize the cavity has been tried with some degree of success.

For some time past a great deal has been written regarding the use of stains and dyes in treating discharging ears. Smith <sup>(1)</sup> reports results in eighty-eight cases treated with synthetic dyes as follows: "practically all the gram negative bacteria, except pyocyanus bacilli, are killed by a .5 per cent solution of sodium hydroxy-mercuri-benzo-phenone sulpho-

nate. *Pyocyanus bacilli* are readily eliminated by treatment with above solution which contains 2 per cent acetic acid. All the gram positive bacteria are readily killed by gentian violet except *staphylococci*. Neutral acriflavine has been proved more potent in the treatment of otitis media associated with *streptococci*, but even this drug is not entirely satisfactory.

Oaken <sup>(6)</sup> reports the use of radiant heat and light in fifty cases as follows: The patients take daily two sittings of one hour each. After the first exposure the ear ache was markedly lessened, and the patients felt better. In most cases the drum membrane cleared up within two or three days, the exudate was absorbed and the bulging of the membrane disappeared. In all the fifty cases he was able to avoid a paracentesis. From four to ten exposures were necessary. In the perforative cases he recommends the following routine: (1) Cleansing the ear canal before exposure to light. (2) Daily exposures to light for one hour at 10 cm distance. (3) On an average, after the fifth day, an air douche once daily. (4) The use of hydrogen peroxide three times daily at home. On an average he reports ten exposures were necessary to cause a cessation of the discharge.

In conclusion, let me suggest that acute otitis media can be aborted or prevented in a great many cases by the removal of the tonsils and adenoids. The diagnosis should be made as early as possible. The treatment depends upon the case. The ear canal should be kept clean at all times after the discharge begins. Daily office treatments are better than to depend upon the home cleansings and will often shorten the time of the discharge.

Bibliography:—1 David T. Smith, *Am Jr. Diseases of Children*, July 1924. 2—A. Spencer Kaufman, *Journal A. M. A.* July 15, 1922. 3—A. M. Alden, *Journal Mo. State Med. Association*, May 1923. 4—Harry Boyd-Snee, *Annals of O. R. & L.*, Sept. 1924. 5—F. Holt Diggle, *The British Medical Journal*, Nov. 22, 1924. 6—W. Oaken, *Die Anwendung der Warmestrahlen in der Ohrenheilkunde*, *Therap. Halbmonatsh.* Dec. 1, 1920.

## COMMITTEE REPORTS, ANNUAL MEETING, TULSA, MAY 12, 13, 14, 1925

### REPORT OF THE COMMITTEE ON HEALTH PROBLEMS IN PUBLIC EDUCATION

Your committee presents for your consideration the following recommendations:

1—Full time county health officers.

2—Every teacher trained, in the next five years for public health work, instead of depending on a nurse whose work is necessarily "few and far between individual inspections."

3—We advocate more articles for the press, written by medical men, in the name of Medical Society, or a health department.

4—We advise that County Societies make provision for public meetings at which their members may make addresses in the hope of educating the public in health matters especially the prevention of disease. There are many subjects which may be well discussed at such meetings such as:

Certain phases of the endocrine glands.

Tuberculosis.

Vaccination and inoculation against various diseases.

Efforts through the schools to prevent the infectious diseases common to childhood.

The prevention and spread of skin, eye and intestinal ailments.

The correction of breathing defects and others which will easily suggest themselves.

The matter will be of interest to the public when properly presented and will be of decided value in improving the health of the people of our state.

We recommend that there be a complete list made of all members of State Medical Association together with their specialty or their preference of specialty. This will be a rather difficult matter to decide and it may be that the State Health Department will be the best agency to handle this matter but with the approval of the State Medical Association. Further, it may be best determined that the man is following a certain specialty or has a preference for such by the various councilors of the State Association who are possibly in closer touch with the Medical Fraternity throughout the State than anyone else.

If such a list can be compiled it would seem from the number of inquiries received regarding whom to employ as a reputable physician might be fairly answered by supplying a list of such physicians.

Adopted—

HORACE T. PRICE, M. D.,  
Chairman.

W. A. LACKEY, M. D.  
WINNIE SANGER, M. D.  
CARL PUCKETT, M. D.



## REPORT OF COMMITTEE ON MEDICAL EDUCATION

Mr. President and Members of the  
House of Delegates:

Obviously, medical education is of importance in so far as it contributes to the good of society, and your committee has considered the question from that point of view.

We shall not enter into an argument to prove that medical education has contributed in a most valuable and remarkable manner to the progress and happiness of the human race. Every intelligent person knows that is true, whether he is or is not a member of the medical profession. But can it be said that the work and progress of the profession has been due to the active interest of the majority, or have the educational results of which we, physicians and laymen alike, are the recipients today, been brought about through the efforts of a small minority of the profession? The latter would seem to be true.

Believing that there are powerful unused educational potentialities in the great mass of the profession, we wish to earnestly call attention to the desirability of more uniform and persistent endeavor on the part of the members of our scientific organizations, particularly the State Medical Association and the component County organizations. Through the wise and proper assignment of scientific work to the individual units of the organizations, we are of the opinion that great good would accrue to those who actively do the work, the organization would be buttressed by sound thinkers, and out of it all would develop groups of logical men and women who would apply the principles of rational medicine in a way and manner that would bring great credit to the professional and great good to society.

Your committee wishes to call attention to the creditable work being done by our State Commissioner of Health and the various units operating under his direction. The State Department of Health should be commended for its effort to place the department upon a strictly scientific basis for through such an organization the citizenship of the State can be reached by educational procedures, as a result of which it is possible for the people to receive not only assistance, but enlightenment; not only protection, but the

means through which they can protect themselves. It is through education of this character that the shot-gun quarantine is relegated to oblivion, while in its place we find the humane and scientific application of preventive measures, the normal activities of a normal community continuing in their usual and accustomed way.

The proper educational standard in medicine could not be maintained without adequate supervision by constituted authorities. To that end, the State Board of Medical Examiners should receive active support in connection with the proper application of scholastic and other essential requirements in the cases of those who make application for license. While just and reasonable procedures ought always to be commended, your committee believes that there should be a minimum standard equal to the requirements of class "A" medical schools, and it is urged that the Board of Examiners be supported in the application of this rule.

Attention is called to the progress of the medical department of the State University. This school has been rated as a first-class, or "A" grade medical college since March 1920. It is engaged mainly in educating the young men and women of this State who have chosen medicine as a career. Your committee believes that it deserves the good will and active support of the profession of the State, and it is urged that the members of this Association take steps to become better acquainted with its facilities, and take advantage of the opportunities it offers in both laboratory and clinical investigation.

Finally, your committee wishes to call attention to the value of just and ethical procedures on the part of members of our profession. If we are to render the right kind of service to our day and generation, the traditions of the fathers must be preserved. We are members of one of the great liberal professions. We are members of a profession whose very existence is based upon the ideal of unselfish service. In these latter days the onslaughts of commercialism against this ideal has sometimes caused fear and apprehension, but, please God, we believe that the ideal still lives, and we call upon the physicians of this Association to exert themselves to the end that all the people in this state may receive adequate, intelligent, conscientious service at the hands of the pro-

fession, for, after all, this is the sum and substance of medical education.

Adopted—

LE ROY LONG, M. D.,  
Chairman.  
A. S. RISSE, M. D.  
T. H. MCCARLEY, M. D.  
THOS. B. HINSON, M. D.

### REPORT OF COMMITTEE ON HOSPITALS

Your committee desires to present as its report a portion of an address delivered by the chairman recently, in which the activities of this committee have been chronicled, and adopt this as our report.

In accord with the evolution in the development of hospitals of this State, and in an endeavor to inform and interest the public, joint open meetings have been held under the auspices of the Oklahoma State Hospital Association and the Committee on Hospitals of the Oklahoma State Medical Association. In addition to the home talent the following distinguished persons have made public addresses: McAlester, Okla., May 18, 1921, Dr. C. M. Rosser; Dallas, Texas and Dr. Jabez N. Jackson, Kansas City Mo.; Oklahoma City, May 10, 1922, Dr. P. G. Magunson of Chicago, Ill.; Tulsa, Okla., May 12, 1923, Dr. C. M. Rosser of Dallas, Texas and Mr. Robert Jolly, Houston, Texas; Oklahoma City, May, 1924, Dr. C. M. Rosser, Dallas, Texas and Dr. LeRoy Long, Oklahoma City.

Oklahoma joined in the organization of the first National Hospital Day, May 12, 1921. The prime purpose of this movement is to familiarize the public with the hospitals in their respective communities. One important feature of this forward movement is the active cooperation of the Tulsa High School. Pupils, under their teachers' escort visit the Oklahoma Hospital, writing a description of a modern hospital and the object of Hospital Day. Fifty dollars in gold is awarded by the Oklahoma Hospital for the three best papers. This innovation has received favorable consideration by many hospital executives in other states.

January, 1924, the Oklahoma Hospital entertained Tulsa County Medical Society and representatives from a number of medical societies in the state. Among other features was a masterful clinic by Dr. L. J. Moorman of Oklahoma City.

In November, 1924, the Oklahoma Hospital cooperated with a group of dentists

of this and adjoining cities consisting of Drs. A. L. Walters, H. G. Carson, Ray H. Ellis and Ira Malone, who brought Dr. Wm. L. Shearer, a distinguished Official Surgeon of Omaha, Nebraska, to this city to hold a teaching clinic for a period of one week, to which physicians, nurses and dentists of the State had access. This clinic will probably be permanently established and stimulate similar formations in other cities.

Support has been given the State Board of Nurses in their efforts to improve the qualifications of nursing service by raising the standards.

All of these efforts have been without public donation or expense to the State Hospital Association. The Association has had the whole-hearted support of "*Hospital Management*" and "*Modern Hospital*" as well as the principal newspapers throughout this state and the State Journal. The public has an obligation to perform and will willingly cooperate if intelligently advised of needs from time to time.

Dr. and Mrs. Fred S. Clinton and the Oklahoma Hospital are hosts Wednesday, May 13, 1925 at the Hotel Mayo at a dinner for the membership of the Oklahoma State Hospital Association and distinguished members of the medical profession as invited guests. A few short addresses, of which Dr. Jabez N. Jackson of Kansas City, Mo., will deliver the principal one, will be delivered on this occasion.

FRED S. CLINTON, M. D.,  
Chairman Hospital Committee.

Adopted.

### REPORT OF COMMITTEE ON STATE MEDICAL ASSOCIATION LIBRARY

We, the library committee appointed by the President submit the following report:

1. It is our judgment that the Oklahoma State Medical Association should take steps to establish a Medical Library in the State of Oklahoma to be known as the Oklahoma State Medical Association Library.

2. That this library be located at the most accessible place in the state for the accommodation of its members as determined by a vote of the house of delegates.

3. That its management be conducted by a library board selected by the president and council.



4. That the management procure a librarian who is or will become conversant with the workings of the library of the A. M. A., to be custodian of the library and to attend to the tabulating of books, periodicals and mailing out same at the request of members, keeping a careful record of all properties and request a reasonable return period of all properties sent out or carried away from the library.

J. A. HATCHETT, M. D.  
ELLIS LAMB, M. D.

Report Accepted—

#### REPORT OF COMMITTEE ON PUBLIC POLICY AND INSTRUCTION OF THE PUBLIC, 1925

Your committee on Public Policy and Instruction of the Public has outlined a plan whereby regular medicine may be "sold" to the public thruout the state. The relation of medicine to the community is of as much interest to the laity as to the physician. The eagerness with which the general public received information of this nature should stimulate the profession to continuously supply them from authoritative sources. The average layman today has a sufficient reading knowledge of medical subjects so that he is able to ask intelligent questions and when he does this he should be given intelligent answers. The mystery surrounding medicine is being broken down and it is our duty as members of the medical profession to see that the public receive their medical information from reliable sources.

Soon after the appointment of this committee we divided the state into four districts, assigning to each member of the Committee, except the chairman, a district, over which he would have personal supervision.

The greatest assistance to and really the initial activity of this committee was the bringing to Oklahoma by this Association of Dr. Morris Fishbein, Editor of the Journal of the A. M. A., for a series of public lectures on various medical subjects of interest to the general public. This series was made possible through the interest and personal solicitation of our President, Dr. E. S. Lain, to whom the full credit must be given. The committee assisted in arranging the itinerary, in getting out newspaper announcements and

in stimulating the work of the local committees so as to secure as large audiences as possible. Dr. Fishbein gave from one to four addresses in each of the following towns; McAlester, Durant, Ardmore, Oklahoma City, Chickasha, Enid, and Tulsa. His remarks were a source of inspiration to the physicians as well as a matter of interest to the public.

As a means of following up this series of lectures and getting this information to those counties to which Dr. Fishbein was not able to go, the committee compiled a lecture on "The Relation of Medical Science to the Community" which was molded along the lines of Dr. Fishbein's address on "The Progress of Medical Science." Each member of the committee was instructed to arrange in his district public meetings of the various County Medical Societies at which this lecture was to be read as a part of the program.

The County Societies have been informed through the State Journal that this lecture is ready. They have been asked to get in touch with the Committee members in charge of their district who will give them ideas on working up this public meeting and furnish them a man to read this lecture. Only a few such open meetings of the County Medical Societies have been held, so that the work has just begun.

Since the work of this committee has only started and since the completion of our present plans will take at least one or two years longer, we recommend that the committee be continued a standing Committee of the Association and that with what changes in the personnel the incoming presidents may wish to make that the Committee be continued and instructed to proceed with this work. We also recommend that the name of the Committee be changed to Committee on Public Relations in place of the rather unwieldy name which it has at present.

WM. H. BAILEY, M. D.  
Chairman.

P. P. NESBITT, M. D.  
A. S. RISSER, M. D.  
McLAIN ROGERS, M. D.  
C. W. TEDROWE, M. D.  
A. L. STOCKS, M. D.

Adopted.

## REPORT OF DELEGATES TO A. M. A. MEETING, CHICAGO, 1924

The seventy-fifth annual session of the American Medical Association held at Chicago in June, 1924, was the most interesting and largely attended session ever held and this is partially accounted for as Chicago is the home of the Association and they were housed in their new building at 535 North Dearborn Street, which has nothing to compare with it in the world. The plant is complete in every detail, and during the time when we were in session all day luncheon was served in the building and there was an abundance of committee rooms aside from the large general assembly room which was ample to take care of all the delegates at every session.

The House of Delegates had an attendance of one hundred and thirty-two, and the commercial exhibit was the largest ever assembled, and the scientific exhibit aroused unusual interest, particularly the special exhibit of fresh pathological tissues on the prevention and treatment of heart diseases.

As is customary the first day the Credentials committee made a report and the secretary called the roll of the delegates. After the roll call the House of Delegates was addressed by Dr. Warnshius, speaker of the House, and Dr. Pusey, president-elect. Dr. Olin West, secretary, presented a very complete report which showed the membership of the Association in April, 1924, was ninety thousand and fifty-six, which is a gain of fifteen hundred over the membership reported the year previously, and the largest the Association has ever had.

Dr. West went into details relative to the State and territorial associations, component County societies, counselor District societies and also the individual member and organized medicine. He also took up the constitution and by-laws of State and County societies so that the same organized principle should run through the whole fabric of the organization as the County societies are the seeds from which the A. M. A. has been brought up. A committee was appointed to submit a uniform set of by-laws for Component societies and to report at the 1925 session.

The Board of Trustees brought in a very complete report, going into detail on the finances which I will not bore you

with, but it showed the Association in a very healthy financial condition. After these reports the House adjourned until Tuesday A. M., and most of us wended our way to Olympia Fields where the A. M. A. Golf Association's ninth annual tournament was on.

Monday evening we were invited to a banquet in honor of Dr. George Simmons who resigned as Editor of the Journal after having held the post for twenty-five years. This banquet was attended by practically all of the officers of the Association, and all united in expressing their appreciation of the work that had been done by Dr. Simmons, and regretted his retiring.

The House of Delegates met in the assembly room Tuesday morning and the Speaker announced the Reference committees who were to serve during the session, and your delegate was placed on the Legislation and Public Relations committee with Dr. Pettitt of Oregon, Dr. Brown of Wisconsin, Dr. Steiner of Connecticut and Dr. Seeman of Louisiana, and this committee represented every section of the United States. All of the standing committees then made their reports which showed that they had not been loafing on the job since the last meeting, after which new business was taken up, and three strenuous days followed.

Dr. Franklin H. Martin spoke to the House on the subject of the Gorgas Memorial, and Dr. Martin's paper was referred to the Reference committee on Medical Education. The president, Dr. Wilbur of California, addressed the Delegates and Trustees and went into details on medical education and demonstrated that he was very familiar with the subject and will accomplish great things for the University of California.

As has been the custom for the last few years the Volstead Act was introduced in an attempt to get the Association to go on record for or against it, which the organization declined to do as they have enough troubles of their own.

The general meeting was held in the auditorium theater at which the regular routine program for such occasions was carried out, after which the president introduced Dr. Pusey, the president-elect, who made a presidential address which was a masterpiece and showed that Dr. Pusey knew more than the financial end of the Association after serving fifteen years as treasurer.



Wednesday the House of Delegates did not meet and the delegates attended their different sections and convened Thursday afternoon, the principal business of which was the election of officers which brought out several contestants for president, and Dr. Haggard of Tennessee was elected president on the first ballot, which was a very popular choice. After the election all the committees made their reports and the House of Delegates went into executive session to take up certain business, after which the House adjourned until called to order in 1925 by Dr. Warnshius who was unanimously re-elected speaker of the House.

Respectfully submitted—

W. ALBERT COOK, M. D.

This report is intended to brief only some of the more important transactions and questions acted on by the House of Delegates of American Medical Association.

1st—Because of complaint by Fellows that matter introduced into the House of Delegates and referred to a committee, but there being no announcement to members of the Association nor any general information that it has been referred to a committee, the result that the views of a large number of practitioners may be ignored because the House of Delegates, which is necessarily a limited body and the committee governed by their own views, and often the House of Delegates rely on report of committee. A recommendation by the speaker of the House of Delegates was adopted that the House of Delegates go into a Committee of the Whole for one hour or longer on second day of session and also on Wednesday or Thursday of the week of our session.

2nd—In the forceful address of President-elect Pusey (William Allen) on medical education, stressing the high cost of medical education and great length of time for present day medical graduates in procuring the degree of M. D. he pointed out that the average age of men entering the practice of medicine as 27½ years and that 7 years (the least time required) after leaving high school is longer than that required for any other craft or profession. That the expense necessary for the degree of M. D. is from \$10,000 to \$15,000. Referring to foregoing statements as determining factors in so many recent graduates entering the specialties without a general experience, with too large per-

cent of present day graduates locating in cities and in consequence depleting rural communities of young medical men and in fact an inadequate supply of physicians.

Dr. Pusey then laid before House of Delegates his plan of training to secure the degree of M. D. as follows:

- 1 The present accredited high school education.
- 2 Three years medical training.
- 3 A hospital internship of not less than a year and a half.
- 4 Proper selection of students on the ground of fitness.

That would turn out a practitioner in four to four and one-half years. For the man who started out or later decided to become a specialist or consultant or who wanted a university or research career add the number of years to correspond to the collegiate Ph. D. The committee after considering the president's address reported as follows: We indorse in principle the discussion by the President-Elect of the perplexing affairs of medical education. Realizing, as we do, that a proper consideration of the suggestions will require an exhaustive study, your committee begs leave to ask that this be referred to council on medical education and hospitals with the suggestion that the council investigate the matter in the light of the excellent address of the President-Elect.

Report of Reference Committee on Medical Education Synopsis: That within a period of a few years the medical schools of the U. S. have been reduced from 160 to 80. The number of higher standard and better equipped schools has risen from two to seventy-four, sixty-three are integral parts of universities. Student enrollment reduced from 28,000 in 1909 to 12,930 in 1919 and has increased to 17,808 in 1923-1924. 97.3 per cent of 17,808 students are in institutions which have higher entrance standards.

Your committee believes at present rate of increase in number of better qualified graduates that before long there will be no question of a shortage of medical graduates. In the United States we have one physician to 724 inhabitants, against one to 1087 in the British Isles. Committee believes the chief reason that medical men move to larger places is that they do not want to subject themselves and their families to the hardships in districts without adequate sanitation, conveniences, schools,

churches and human intercourse, etc., and that this condition is being constantly alleviated by improvement in transportation, good roads, automobile, etc., enabling physicians to extend practice over larger areas.

Shall we attempt to cure this condition which is not due to raising of standard of medical education, but the dangerous, the humiliating, the suicidal method of lowering standards, which we have so painfully raised by years of hard struggle and conscientious work. Your committee believes the answer of the association will be no! By speeding up our secondary education, grammar and high schools, it is possible for a boy to be ready for college at 17 instead of 19 years. Motion to adopt report carried.

That the by-laws be amended at the next annual session as follows: Amend section 3, chapter 1, of the by-laws by substituting 1925 for 1903 in second line of that section, so that the first sentence of section 3, chapter 1, of the by-laws shall read: "At the annual session of 1925, and every third year thereafter, the House of Delegates shall appoint a committee on reapportionment, of which the speaker and the secretary shall be members." On motion it carried.

2nd—That the constitution be amended at the next annual session as follows: Amend section 3, article 5 of the constitution by substituting the figures 175 for the figures 150 in the second line of said section so that the first sentence in this section shall read: "The total voting membership of the House of Delegates shall not exceed 175."

Report of Committee on re-apportionment of Delegates: This committee composed of five, including speaker of House and Secretary, reported as follows: "That the re-apportionment of delegates be affected on the basis of one delegate for each 950 members or fraction thereof for all constituent associations having a recorded membership of 950 or more. Under the provision of the by-law each constituent the part of the applicant to unusually im-association with a smaller membership is of course entitled to one delegate.

Supplementary Report of Judicial Council: The Medical profession is confronted today with one of the most important and serious problems that it has been called on to meet. Shall the medical profession vend its products directly to the consumer

or shall it sell them to a middleman or third party? The American Medical Association favors periodic medical examination.

One company preferred stock \$400,000, of which \$326,000 is outstanding. Common stock outstanding \$689,100. In 1923 earnings of this company \$611,146.93—Profits \$56,217—30 per cent on money paid in. This company has contracts with 39 old line life insurance companies to furnish them with reports on examinations made on their policy holders. One company has 8,000 examiners.

Jobbers buy service physicians for \$5.00 and sell to individuals for \$20.00 to \$25.00 Always have urine sent to company.

Respectfully submitted—

McLAIN ROGERS, M. D.

Report of the Secretary-Treasurer-Editor,  
Thirty-Third Annual Meeting, Tulsa, May 12, 13, 14, 1925.

To the Council, House of Delegates, and Members:

Gentlemen:

In conformity with regulations of the Constitution and By-Laws, I herewith submit report of various phases of our work covering the time from May 1, 1924 to April 30, 1925, inclusive. Condensed statements of funds received and expended are included herewith. In addition to this there has been placed before the Council's auditing committee a report of the auditor, certificates of the Commercial National Bank, Muskogee, showing the amounts on hand in the different funds, as well as all books, duplicate deposit slips, and cancelled checks.

*The Journal and Advertising:*

Due to the falling off of national advertising patronage incident to business depression our advertising receipts have not been as large as the previous year, but they are now increasing and there is every reason to expect an increase during the coming year. We take this opportunity to again urge every member purchaser of supplies handled by our advertisers to give them preference when it comes time to make their purchases. Only by this means may we hope to continue to deserve a larger advertising clientele. Your advertiser supports your JOURNAL, you should support him as a matter of good business, justice and fairness.



*Membership:*

April 30, 1924 we had 1535 members; April 30, 1925 we had 1525 members, a decrease of ten.

*Deaths in our Membership:*

Since our last report we have had to chronicle the sad passing to the Great Beyond the following deceased members:

Dr. R. M. Shaw, Oklahoma City.  
 Dr. Percy A. Smythe, Enid.  
 Dr. J. M. Stephens, Hastings.  
 Dr. J. B. Murphy, Stillwater.  
 Dr. G. A. Morrison, Poteau.  
 Dr. J. J. Chapman, Lawton.  
 Dr. E. J. Orvis, Blackwell.  
 Dr. W. J. Brinks, Manitou.  
 Dr. W. E. Dicken, Monrovia, Cal.  
 Dr. J. H. Noah, DeNoya.  
 Dr. F. C. Rose, Allen.  
 Dr. J. R. Fleming, Keystone.  
 Dr. J. T. Williams, Webb City.  
 Dr. Thomas S. Williams, Stillwell.  
 Dr. J. H. Hartford, Oklahoma City.  
 Dr. J. Angus Gillis, Frederick.  
 Dr. J. P. Miller, Erick.  
 Dr. William Nairn, Alluwe.  
 Dr. J. F. McArthur, Wilburton.  
 Dr. G. W. Amerson, Milo.  
 Dr. L. H. Buxton, Long Beach, Cal.  
 Dr. A. J. Willard, Cyril.  
 Dr. R. S. Evans, Claremore.

*Medical Defense:*

At our last annual meeting the Medical Defense Committee decided to limit the expenses allowed in any given case entitled to defense to the sum of One Hundred dollars (\$100). While this sum is in keeping with that in other states, notably our near neighbor, Missouri, there has been some dissatisfaction with the arrangement. However, the amount is often more than enough to settle without compromise many suits of the character involved, and was decided upon as a very liberal compromise as between abandoning this feature entirely or being drawn into the defense of very long and tedious litigation, some cases of which were of a doubtful nature, and some of which disclosed a desire upon the part of the applicant to unusually impose upon your Association. There is a strong tendency or belief in many quarters to entirely abandon this feature, and for several reasons. It has been questioned whether or not any return feeling of loyalty has been induced by our undertaking these defenses. It has not been noticed that defense of such cases has particularly increased membership or interest in our Association in the localities where

we have been called upon to expend large amounts. In some instances men we have defended have either entirely lapsed their memberships or have been unwarrantedly negligent in keeping it up. In other instances the only apparent interest the member has ever evidenced in our work has been that involved in fighting his particular case. The status of this work at present, with cases concluded and pending is as follows:

Case No. 5943 Wagoner County—pending.

Case No. 28053 Tulsa County—dismissed by plaintiff.

Case No. 8050 Carter County—dropped on account of lapse in membership.

Case No. 5516 Caddo County—verdict in favor of defendant.

Case No. 2622 Marshall County—dismissed; defendant served by trickery.

Case No. 45142 Oklahoma County—ready for trial in due course.

Case No. 24172 Tulsa County—ready for trial in due course.

Case No. 8136 Lincoln County—Case turned over to defendant's own attorneys.

Case No. 3169 McClain County—dismissed by plaintiff.

Case No. 7049 Comanche County—pending for some time.

In too many of the above it has been asserted by the defendant physician that the suit was inspired by a professional competitor, even though that activity was not disclosed at the trial.

*Finances:*

## FINANCIAL STATEMENT

OKLAHOMA STATE MEDICAL ASSOCIATION  
 Dr. C. A. Thompson, Secretary-Treasurer-Editor

Muskogee, Okla., May 1, 1925.

## RECEIPTS

May 1, 1924, Balance on hand in bank	\$2,496.34
Advertising and Subscriptions	6,328.05
County Secretaries	6,485.10
Medical Defense Fund, Loan	2,500.00
Interest, (Liberty Bond)	21.25
<b>Total</b>	<b>\$17,830.74</b>

## EXPENDITURES

Printing: JOURNAL	\$5,160.60
Miscellaneous	449.99
Secretary's Salary	\$5,610.59
Due Secretary, 1924 Salary	2,356.89
Business Manager, Salary	83.90
	1,820.00
Office Rent	279.60
Stamps and Postage	225.00
Telephone, Telegraph, Drayage and Express	33.13
Office Supplies	157.15
Press Clippings	55.00

Refunds .....	70.00
Treas. Bond and Audit of Books.....	45.00
Subscriptions .....	4.50
Expense, Oklahoma City Meeting, 1924.....	259.20
Legislative and Delegates Expense .....	501.57
Expense, Dr. Morris Fishbein Lectures.....	239.72
Checks deposited in bank returned unpaid .....	12.00
Medical Defense Fund .....	1,000.00
Payment of Loan, (Med. Defense Fund) .....	2,500.00

Total .....\$15,253.25  
 May 1, 1925 Balance, Cash on hand..... 2,577.49

Total .....\$17,830.74  
 Balance May 1, 1925,  
     Cash on hand .....\$2,577.49  
 Liberty Bond ..... 500.00

Total Cash Assets .....\$3,077.49  
 Balance, May 1, 1925,  
     Cash on hand .....\$2,577.49  
 Checks, Nos. 1458, 1975, 2015  
     Outstanding ..... 52.15  
 Cash in Bank, May 1, 1925 .....\$2,629.64  
 (Signed) H. A. LEWIS, Auditor.

#### FINANCIAL STATEMENT MEDICAL DEFENSE FUND

Muskogee, Okla., May 1, 1925

#### RECEIPTS

May 1, 1924, Balance on hand.....\$ 71.08  
 Time Deposits Cashd ..... 3,500.00  
 Interest on Time Deposits ..... 81.00  
 Okla. State Medical Assn. (Loan) ..... 2,500.00  
 Oklahoma State Medical Assn ..... 1,000.00  
 Total .....\$7,152.08

#### EXPENDITURES

Attorney's Fees and Legal Expense .....\$1,040.80  
 Okla. State Medical Assn. (Loan)..... 2,500.00  
 Time Deposits, (Com. Natl. Bank) ..... 3,500.00

Total .....\$7,040.80  
 May 1, 1925, Balance on hand in bank..... 111.28

Total .....\$7,152.08  
 May 1, 1925, Cash on hand  
     in Bank .....\$ 111.28  
 Time Deposits Com. Natl Bank 4,150.00

Total Cash Assets, May 1, 1925  
     Medical Defense Fund .....\$4,261.28  
 Total Cash Assets, Oklahoma State  
     Medical Association .....\$3,077.49  
 Medical Defense Fund ..... 4,261.28

Grand Total Assets .....\$7,338.77

(Signed) H. A. LEWIS, Auditor.

Respectfully Submitted,

C. A. THOMPSON,  
 Secretary-Treasurer-Editor.

#### TO WHOM IT MAY CONCERN:

This is to certify that there was to the credit of the Oklahoma State Medical Association on checking account with this bank, at the close of business, April 30,

1925, according to our records, the sum of \$2,629.64.

This bank was holding for said Association on that date, for safe keeping, one \$500.00 Liberty Loan bond.

Yours very truly,

(Signed) E. D. Sweeney,  
 Vice-President

Commercial National Bank,  
 Muskogee, Oklahoma.

#### TO WHOM IT MAY CONCERN:

This is to certify that there was to the credit of the Medical Defense Fund on checking account with this bank, at the close of business, April 30, 1925, according to our records, the sum of \$111.28; and on time deposit the sum of \$4,150.00, evidenced by three certificates of deposit as follows:

No. 16206 dated 2-20-25, \$1,500.00.

No. 16207 dated 2-20-25, \$2,000.00.

No. 16349 dated 4-24-25, \$ 650.00.

Yours very truly,

(Signed) E. D. Sweeney,  
 Vice-President.

Commercial National Bank,  
 Muskogee, Oklahoma.

Report adopted.

#### NOTED CHEMISTS WILL GIVE AID TO HOOVER

The appointment of an advisory committee composed of outstanding members of the chemical industry to cooperate with the Department of Commerce has been announced by Secretary Hoover.

The purpose of this committee is to assist the chemical division of the department in mapping out a program which will be of the most practical and immediate benefit to the industry.

The membership of the committee, as announced by Secretary Hoover, includes Dr. Leo Bakeland, president, American Chemical Society and inventor of bakelite; Dr. A. S. Burdick, president of the Abbott Laboratories of Chicago, and formerly president of the American Drug Manufacturers' Association; Dr. H. E. Howe, editor of the Journal of Industrial and Engineering Chemistry; Dr. Charles H. Herty, president of the Synthetic Organic Chemical Manufacturers' Association; Henry Howard, chairman of the board of governors of the Manufacturing Chemists' Association; G. Ober, president of G. Ober & Sons, Baltimore, and past president of the National Fertilizer Association; E. G. Trigg, president of John Lucas & Co, Philadelphia, and president of the Agricultural Insecticide and Fungicide Association; A. Creassy Morrison, president of the Acetylene Gas Manufacturers' Association, and S. W. Wilder, secretary of the Manufacturing Chemists' Association.



# THE JOURNAL

OF THE

## Oklahoma State Medical Association

Issued Monthly at Muskogee, Oklahoma, under direction of the Council

VOLUME XVIII JULY, 1925 No. 7

DR. CLAUDE A. THOMPSON.....Editor-in-Chief  
308 Barnes Building, Muskogee, Okla.

DR. P. P. NESBITT.....Associate Editor  
814 Surety Building, Muskogee, Okla.

Entered at the Post Office at Muskogee, Oklahoma, as second class mail matter, July 28, 1912.

This is the official journal of the Oklahoma State Medical Association. All communications should be addressed to The Journal of the Oklahoma State Medical Association, 308 Barnes Building, Muskogee, Oklahoma. \$4.00 per year, 40c per copy.

The editorial department is not responsible for the opinions expressed in the original articles of contributors.

Reprints of original articles will be supplied at actual cost, provided request for them is attached to manuscript or made in sufficient time before publication.

Articles sent this Journal for publication and all those read at the annual meetings of the State Association are the sole property of this Journal. The Journal relies on each individual contributor's strict adherence to this well-known rule of medical journalism. In the event an article sent this Journal for publication is published before appearance in the Journal, the manuscript will be returned to the writer.

Failure to receive the Journal should call for immediate notification of the editor, 308 Barnes Building, Muskogee, Oklahoma.

Local news of possible interest to the medical profession, notes on removals, changes in address, deaths and weddings will be gratefully received.

Advertising of articles, drugs or compounds unapproved by the Council on Pharmacy of the A. M. A., will not be accepted.

Advertising rates will be supplied on application. It is suggested that wherever possible members of the State Association should patronize our advertisers in preference to others as a matter of fair reciprocity.

PRINTED BY HOFFMAN-SPEED PRINTING CO., MUSKOGEE

### EDITORIAL

#### THE SOUTHERN AND AMERICAN MEDICAL MEETING AT DALLAS.

The Southwest is unusually fortunate in having secured two great coming events scheduled for the near future. These will give many members of the medical profession opportunity to attend meetings who have never before been able to be present on account of long distance and other impediments.

The Southern Medical Association will meet in Dallas November 9 to 12, and the

American Medical Association will meet there in the Spring of 1926.

Dallas will be hard put to it to entertain these meetings on account of the normally crowded condition of her hotels, but the spirit of the Southwest has a happy faculty for overcoming any and all obstacles, so prospective attendants need hardly worry on that score, but everyone should cooperate by giving early notice of their intentions to attend these meetings, thereby lightening the load of the various committees in charge.

The Southern Medical Association has grown into the second medical organization of America in point of size and attendance. It is second to none in offering matters of interest to the medical profession. A glance at the names sponsoring the organization is sufficient to warrant its worthiness. Oklahomans have the strongest personal interest and pride in making both these meetings as successful as possible. The American Medical Association has heretofore met in the greater centers of population, and it is a distinct compliment that they have paid the Southwest in selecting Dallas for the 1926 meeting. In this instance we should heartily join our Texas neighbors in making the meeting successful from every standpoint.

#### VACATION DANGERS.

Nearly everyone takes more or less of a vacation if it is possible during the summer months. It is very beneficial, also very dangerous, from the standpoint of various infections incident to Oklahoma and the season of the year. These may, however, be largely avoided by remembering the sources of the infections and observance of simple rules for prevention.

Theoretically all should be protected against typhoid by proper prophylactic vaccination, but practically they are not. This is especially true of the younger people, who are also more prone to infection and to the severer types of the disease. Time has proved beyond question that this preventive measure is practically free from danger or inconvenience, also that it is almost surely protective. Those who will not or negligently fail to acquire such protection must of necessity, if they would be protected, look carefully into the matter of protection of water and food supplies. Many of them do not realize that the clearest hill or mountain stream may

be most dangerous. Every means available within reason to protect the material taken into the digestive tract should be used.

Malaria is prevalent in Oklahoma, especially is this so during the summer months, when the mosquito is at her best form. The only protection against this infection is to stay away from the mosquito or properly protect the sleeping place against it by screens. Anyone may carry sufficient mosquito bar along on the trip to serve the purpose, it is cheap and effective.

There are many other infections not so prevalent, but dangerous when they do arise. Dysentery calls for closely guarding the water and food supplies in similar manner as that used in typhoid protection. The entire matter of this protective work, of course lies with the family physician. His influence should be used in advising all the necessary protective means at his command.

—o—

#### *Editorial Notes—Personal and General*

DR. E. W. REYNOLDS, Bristow, was recently elected City physician, succeeding Dr. O. C. Copedge.

DR. J. HUTCHINGS WHITE, Muskogee, is enjoying his trip to Europe, a card from London testifies.

DR. EVERETT S. LAIN, Oklahoma City, is taking some special work at Columbia University, New York, during June and July.

DR. W. N. DAVIDSON, and DR. H. C. MANNING, Cushing, Santa Fe surgeons, attended the annual meeting of the Santa Fe Railway Surgeons at Denver.

DR. T. F. SPURGEON, Frederick, is making an auto trip to New York with his family, where Dr. Spurgeon is taking some post-graduate work, and expects to return home by August 1.

DR. A. J. WEEDN, Duncan, is erecting a new modern two-story and basement brick hospital, with a forty room capacity, with X-ray, etc., and all installations of the very latest patterns, including a laboratory.

The YALE medicos entertained the Payne County Medical Society with a program and refreshments June 10. Drs. H. M. Prentiss and W. B. Hudson, Yale, and Dr. Fred D. McBride, Oklahoma City, read papers.

DR. and Mrs. D. D. McHENRY, Oklahoma City, recently returned from the East, where they spent a month in New York, Washington and Boston, and attended the commencement at Harvard, where their son, Chester McHenry was graduated an M.D.

DR. H. C. MANNING, Cushing, has leased the Cushing Municipal Hospital for another year.

DR. S. E. MITCHELL, Muskogee, attended the officers training school held at San Antonio in June.

DR. H. B. AMES, Alva, and family, are making a two months' trip through Yellowstone Park and the Northwest.

DR. ERNEST BALL, formerly of Ebano, Mexico, has been touring the U. S. since January, and expects to locate at Antlers shortly.

DR. E. M. HARRIS, Cushing, was called to Wilburton recently to be with his father, who was suffering from an attack of ptomaine poisoning.

DR. G. H. STAGNER, Erick, has three excellent locations for physicians; one as assistant to himself at Erick, and two in the vicinity of Erick.

DR. D. W. HUMPHREY, Oilton, father of Dr. B. H. Humphrey, Sperry, died June 16th. Dr. Humphrey was 68 years old and had been practicing medicine for 48 years.

BECKHAM COUNTY MEDICAL SOCIETY, held its annual meeting recently, Dr. V. C. Tisdal, Elk City, being re-elected President, and Dr. W. D. Oliver, Erick, re-elected Secretary.

OTTAWA COUNTY MEDICAL SOCIETY has purchased a camp resort on the Elk River, and plans to hold its meetings there in future as well as using the resort as an outing place for their families.

STEPHENS COUNTY MEDICAL SOCIETY at its June meeting, decided to discontinue meetings for the summer, until September. A program was given, one a case of twin pregnancy by Dr. W. S. Ivy, and a case of diabetes by Dr. J. W. Niweg.

DR. FRED S. CLINTON, Tulsa, was elected President of the Medical and Surgical Society of the Santa Fe Railway at their 27th annual meeting in Denver, Colorado, June 22-23, 1925. There were eight states represented at the opening of the session.

DR. D. L. GARRETT, Tulsa, recently made an airplane trip of 400 miles to Shamrock, Texas, to operate on the son of Dr. J. W. Gooch for appendicitis, making the trip in three hours flying time. Dr. Gooch's son was suffering from an acute attack of appendicitis and was operated on in his father's hospital at Shamrock. He is recovering.

MUSKOGEE COUNTY MEDICAL SOCIETY held an interesting meeting at the Town and Country Club June 8. After a dinner the subject of the evening was considered: "Anesthesia, History - Pharmacology - Indications and contraindications." The papers were read by Drs. C. V. Rice on "Nitrous Oxide"; N. R. Holcombe on "Ether"; C. E. DeGroot, on "Chloroform"; Ed White on "Ethylene Gas"; and W. P. Fite on "Local Anesthesia". The papers were widely discussed and the meeting was a success.



DR. FRED S. CLINTON, Tulsa, announces the sale of the Oklahoma Hospital, to the Delaware Baptist Association, an organization of churches of Tulsa, Creek, Osage, Nowata, Washington and Rogers counties. This records the passing of one of the State's most successful hospitals. Ten years ago Dr. Clinton incorporated the Association and erected a modern plant, since which time it has been under his direction. Associated with Dr. Clinton was a group of active men who have by their cooperation made the institution a marked success. Dr. Clinton remains as one of a board of members for the control of the property. Under the new arrangement the hospital will be owned and controlled by the Baptists, it will be conducted on entirely non-sectarian lines. Other denominations will be represented on its management, and it is proposed to make it a great protestant hospital. All present employees will remain with the new management.

DR. JOHN D. LEONARD, Muskogee, Director of Muskogee County Health Unit has filed the Unit's First Annual Report. It shows the various types of work performed and gives much statistical information. It gives the death rate, per 1000 as 19.72 per cent; births 11.16 per cent. Deaths under two years were 24.65 per cent; stillbirths 9.30 per cent. A great deal of laboratory work was performed, including cultures for typhoid, Widal's, malaria, Hookworm, etc. Schools, institutions, all towns and villages were given adequate sanitary inspection and control, as far as possible. Considerable progress was made in prenatal and maternity work.

### ORTHOPAEDIC SURGERY

Edited by Earl D. McBride, M. D.  
1006 First Nat'l Bank Bldg., Oklahoma City

1. CLINICAL CASE REPORT.—Wm. L. R., age 36, tank builder, admitted to St. Anthony Hospital, July 4, 1922. Referred by Dr. P. M. Richardson, Cushing.

History—Three days before admission fell thirty feet into the bottom of a steel tank covered by eight inches of water. He landed on his outstretched arms, and head. First aid was rendered at the Cushing hospital. Both elbows, arms, wrists and fingers were extremely swollen and pain was so severe that morphine was required. There was a large laceration on the forehead, but no cerebral symptoms. X-rays revealed dislocation of the ulna and radius in the left elbow, fracture of the carpal scaphoid and forward dislocation of the carpal semilunar bone in the left wrist, also a fracture of the base of the first metacarpal bone. There was a comminuted fracture of the head of the radius and internal condyle of the humerus of the right elbow and fracture of the middle metacarpal bone. The elbow was reduced immediately, and a cast applied from axilla to the knuckles with both elbows flexed to a right angle. On July 18th open operation was performed on the right elbow and the head of the radius and several small fragments of bone removed. There was a large hematoma in this region which had become infected. This was treated by Dakin's solution and cleared up within a few days. On August 5th, the elbow had to be incised again for an abscess. This also cleared up promptly. On August 14th, the left wrist was

operated upon and the carpal semilunar together with the proximal fragment of the scaphoid bone were removed. The incision was on the palmar surface immediately to the ulnar side of the flexor carpa radialis. The medium nerve and flexor digitorum muscles were pulled to the inner side while the flexor profundus tendons were separated so as to expose the semilunar. It was found lying anterior to the head of the os magnum. Physiotherapy was started as soon as possible on the elbows, wrists and hands, and traction manipulation splints were applied to the left hand. The ultimate results in six months time were as follows:

About 50% motion in the right elbow, full motion in the right wrist and hand. Full motion in the left elbow with almost total loss of use of the left wrist and hand.

Discussion:—The important sequela in this case is the injury to the left wrist. Fracture of the scaphoid bone with dislocation of the semilunar



"LATERAL X-RAY SHOWS DISLOCATION OF THE SEMILUNAR FORWARD. A. P. VIEW SHOWS FRACTURE OF SCAPHOID."

or, or either lesion by itself is far more painful and disabling than Colles Fracture of the radius. It produces a typical deformity followed by a spasticity of the tendons in the hand which results in a more or less permanent stiffness and deformity of a characteristic type. The writer has termed this deformity neuro-spastic fixation. When the semilunar alone is dislocated early reduction will give a perfect result. When the scaphoid is fractured it usually unites in fibrous union and there is usually some limitation of motion in the wrist together with persistent pain and weakness. Early removal of the proximal fragment is probably the best treatment. The great danger is overlooking either of these injuries in the x-ray examination, because the resulting deformity is so disabling and the pain is so persistent that the morphine habit may be acquired.

**2. PROTEIN THERAPY: ITS USE IN CHRONIC INFECTIOUS ARTHRITIS.**—J. C. Middleton, *Glasgow Med. Journal*, Sept., 1923, p. 124.

Middleton records the results in the patients suffering from rheumatoid arthritis and allied conditions. Six were males and four were females, the average age being 40 years.

*Bacillus typhosus* in doses of 100,000,000 bacilli were given. The temperature reaction varied from 101 degrees to 104.8 degrees, and lasted as a rule about 24 hours. No serious effects were felt in any of the cases and definite improvement was recorded in most of them. Few, however, were of the severe bed ridden type where we need help most.

**3. OPERATIVE TREATMENT OF PERIPHERAL PARALYSIS (POLIOMYELITIS AND NERVE INJURIES) THROUGH THE TRANSFERENCE OF POWER OF A HEALTY TO A PARALYZED MUSCLE BY MEANS OF A NEWLY FORMED TENDON.**—Katzenstein, *Med. Clinic*, January 13, 1924, p. 41.

The nature of this operation consists in the utilization of power of a muscle situated above the sphere of paralysis, i.e. in a higher "storey" and in the avoidance of splitting this muscle. Out of fascia or skin a new tendon is formed which is connected above with the disperser of power, the active muscle, and is attached below to the paralyzed or group of muscles. The contraction of the disperser-muscle will be transmitted by means of the artificial tendon to the paralyzed musculature. The choice of the corresponding power disperser will result in an automatic action of the activated joint, and no re-education of muscle, as in the old methods, would be required. The operation has been performed 30 times in 28 cases, and has proven very satisfactory in re-establishing function of the paralysis of the facial nerve, the radical, and the sciatics, and poliomyelitic paralysis of the peroneal muscles, the tibialis group, and one case with total paralysis of the thigh and leg muscles.

**4. KOEHLER'S DISEASE OF THE SECOND METATARSAL.**—Altschul, *Med. Clinic*, Jan. 3, 1924, p. 42.

Based upon 42 previous published and five additional cases of the author, he gives the following interpretation of the mode of development of this affection: Through change of static relations the second metatarsal head is exposed to greater pressure. By this means pressure necrosis takes place in the epiphysis, which eventually collapses. Following this, a regenerative process of the metaphyseal periosteum takes place and leads to a rebuilding of the epiphysis. The exuberance of the metaphyseal periosteum spreads also diaphyseally and results in a thickening of the diaphysis. It is, however, possible that in these cases a constitutional weakness of bone predisposes to the affection.

**5. CORRECTION OF EXTREME FLATFOOT (GLEICH OPERATION).**—J. P. Lord, *Jour. Am. Med. Assn.*, Nov. 3, 1923.

The object of this operation is to so change the alignment of weight bearing as to shift the center of gravity inward and then throw the di-

rection of the body weight outside the center of the foot.

This is done by making a curved incision a finger's breadth behind the external malleolus. A thin broad chisel is then driven obliquely through the bone. The posterior portion is displaced inward the required distance and a plaster cast applied. Fourteen cases are reported, all but one of which had various other corrective operations done which were indicated in each case.

## SURGERY

**BLADDER INJURY DURING HERNIA OPERATIONS**—Leigh F. Watson, *American Journal of Surgery*, April, 1924.

Large, irreducible, or strangulated hernias often present unusual difficulties, sometimes taxing the skill of the most experienced operators. The danger lies in accidental injury to the bladder, intestine, blood vessels or vas deferens. The bladder is involved in about 1 per cent of all inguinal hernias in adults. In certain cases it is only by a most careful examination of the sac that bladder injury can be avoided. Bladder wall should be suspected when the sac is thick, when it is covered by a quantity of lemon-colored properitoneal fat, or when there are numerous blood vessels on its surface. When the bladder is in the sac wall, it is nearly always on the inner side, and for this reason the sac should always be opened at a thin white point on the outer side.

**PREVENTION OF POSTOPERATIVE HERNIA**—Leigh F. Watson, *Northwest Medicine*, April, 1924.

A muscle-splitting incision should be used when possible. In long incisions muscle fibers must not be sacrificed needlessly, and the motor nerves must be saved. The fascia is the strongest structure in the abdominal wall and it is very essential to close it properly. It is frequently under tension and unites more slowly than muscle tissue; for this reason it is necessary to overlap each layer separately. When closure under tension is unavoidable, the patient's shoulders should be kept in a semi-reclining position and the knees elevated on pillows (the "jack-knife" position) for a week after operation. Tension or stay-sutures are valuable to prevent strain on the fascia stitches. A gain in weight after operation, especially in obese subjects, should be avoided because it increases intra-abdominal tension and weakens the abdominal wall. The use of an elastic belt checks the tendency to rapid accumulation of fat.

**GASTROINTESTINAL SYMPTOMS AND EPI-GASTRIC HERNIA.**—Leigh F. Watson, *New York Medical Journal and Record*, April 16, 1924.

Hernia in the linea alba has often been confused with gastric and duodenal ulcer, and sometimes the two conditions exist at the same time. The presence of a tumor or slitlike opening in the linea alba, with or without the protrusion of a small mass on coughing, will help to establish a diagnosis of hernia.

In ulcer the symptoms come on at a certain interval after eating, while in hernia the paroxys-



mal attacks have no relation to meals but usually follow physical exertion, and the patient finds the most relief is secured by assuming a doubled up position, which relaxes the linea alba—when the omentum slips back into the abdominal cavity the pain disappears. Epigastric hernia must also be distinguished from cholelithiasis, cholecystitis, gastralgia, gastritis, carcinoma, sarcoma, appendicitis, nephrolithiasis, abscess or tumor of the abdominal wall, and the gastric crises of tabes.

**JACK-KNIFE POSITION AFTER HERNIA OPERATIONS.**—Leigh F. Watson, *Annals of Surgery*, August, 1924, Ixxx, p. 239-241.

The posture of the patient after an operation for hernia is usually neglected. If surgeons realized that they could reduce their recurrences materially, besides adding to the comfort of their patients, the jack-knife position would become a matter of routine for inguinal, femoral, umbilical and ventral hernias which presented difficulties in closing the fascial layers.

In inguinal hernia operations the best exposure is obtained by keeping the thigh extended until the deep sutures are ready to be tied, when it should be elevated, adducted and rotated inward. This reduces the distance between Poupart's ligament, the internal oblique and conjoined tendon from 25 to 50 per cent, depending on the size of the opening, the variety of hernia, and the development of the muscles. After the patient is returned to bed his knees and shoulders should be elevated 25 to 45 degrees by means of pillows and a back rest. This position takes the strain off of the stitches during the process of repair, permits a broad firm union of fascial flaps, and reduces the percentage of recurrences. The jack-knife posture should be maintained as long as the patient stays in bed.

**BACTERIOLOGY and PATHOLOGY**

Edited by Wm. H. Bailey, A.B. M.D.  
Wesley Hospital, Oklahoma City

**RENAL FAILURE CASTS.**—Thomas Addis, M. D., San Francisco, Jr. A.M.A. April 4, 1925.

The author calls our attention to and makes an interpretation of the significance of what many of us have noted in the microscopic examination of urinary sediment for a long time, namely, broad hyaline and granular casts. He classifies them into three groups which he believes are merely degeneration forms of the primary cast of this group. These groups or stages he calls 1. "broad cellular casts", a group which he differentiates from the epithelial or leukocytic casts; 2. "broad waxy casts", which are a fading out or a waxy degeneration of the first form; and 3. the "broad granular casts", which are very dark in color and granular, representing the last stage before final disintegration. His checking the appearance of these casts in the urine with the blood chemistry of the patient is quite significant and seems to show rather definitely that they only appear in conditions where the renal function is sufficiently impaired to cause a damming back of the non-protein-nitrogenous elements in the blood.

His conclusions are as follows:

1. When all or almost all the casts found in the urinary sediment were very broad, the blood

urea concentration was always more than 100 mg. per hundred cubic centimeters. The patients died in true uremia.

2. When only some of the casts were broad, there was always some degree of renal failure. But in certain patients during the height of activity of bacterial infections, a considerable proportion of the casts were broad, although there was no marked impairment of renal function; while in other patients whose general condition was good, none of the casts were broad, although there was a pronounced reduction in the functional capacity of the kidneys.

3. The morphology and physical characteristic of broad casts indicate that they are of cellular origin. They are formed in the larger collecting tubules and in the ducts of Bellini. They occur in many diverse forms of renal injury.

**LEUKOCYTOSIS FOLLOWING TYPHOID PERFORATION OF INTESTINES.**—Edward M. Livingston, M. D. and Willard H. Squires, M. D., New York, Jr. A. M. A. April 4, 1925.

Although the most usual impression is that there is no immediate leukocytosis following a perforation in typhoid cases, the authors state that a search of the literature shows that at least five different teachings concerning this point are given. Some of these statements are diametrically opposite to others.

Their conclusions based on a review of the records on sixty-five cases of Typhoid perforation treated in Bellevue Hospital, New York, were as follows:

1. Although typhoid fever has greatly decreased in recent years, the surgical importance of intestinal perforation has not decreased.

2. From 1905 to 1924, 2,215 patients with typhoid were treated at Bellevue Hospital. Perforation of the intestines was established in 3.11 per cent of these patients. Operative recovery occurred in 28.12 per cent.

3. The opinion that leukocytosis is a constant or usual finding following typhoid perforation of the intestines is erroneous.

4. In fifty-five cases of typhoid perforation, leukocytosis was present in but 15 per cent.; a slight rise in the white blood count in 15 per cent.; unchanged blood findings in 52 per cent., and a decided fall of leukocytes in 18 per cent.

5. Attempts to utilize these variable white blood reactions in the diagnosis of typhoid perforation of the intestines has led to repeated errors.

6. In cases representing clinical evidence of typhoid perforation of the intestines, any delays in operating to observe further the leukocytic changes are not justified.

**EYE, EAR, NOSE and THROAT**

Edited by Jas. C. Braswell, M. D.  
726 Mayo Bldg., Tulsa

**A SERIES OF CASES OF TUBERCULOUS LARYNGITIS IN CHILDREN.**—Agassiz, C. D. S.: *J. Laryngol & Otol.*, 1924. xxxix, 628.

The occurrence of tuberculosis in the larynx in children is believed to be uncommon. Eleven cases are reported by the author and in all but one the diagnosis was confirmed by finding the tubercle bacilli in the sputum. In the one case

the physical signs and symptoms were of such a character as to leave little doubt as to the diagnosis.

Six of the patients were boys. The ages of the children range from 10 to 15 years.

In all cases reported, the absence of marked laryngeal symptoms of laryngeal involvement is a conspicuous feature. In the majority the only symptom noted is the huskiness of the voice. In some cases there is no sign suggesting involvement of the larynx. Absence of dysphagia is a marked feature.

As a rule the lesion is not extensive. Swelling and redness of the arytenoids with or without tuberculous deposits or ulceration of the cords are apparently the most common changes.

The period of illness in the authors series of cases ranged from three months to four years.

#### THE CORRECTION OF SADDLE NOSES.—Eitner, E.: *Med. Clin.*, 1924, xx, 1000.

Nasal deformities are usually corrected with tissues obtained from the patient's body, such as pieces of tibia, costal cartilage and pieces from the cartilinous septum or the frontal process, etc. Costal cartilage is particularly favored it is easily obtained and easily shaped.

The author has often used ivory which seems to have good resistance and can be easily shaped and sterilized. Its only disadvantage is that it is very rigid and breaks very easily.

As experience has shown that animal tissue which has been preserved for a long time has marked resistance to resorption, the procedure now recommended by Eitner is as follows:

Costal cartilage of young cattle or horses, which becomes ossified early, is taken fresh and placed in 1 per cent Grams solution for fourteen days. It is then transferred for several weeks to a solution of 10 per cent formalin and 5 per cent formalin and 5 per cent nitric acid until it has gained the desired pliability. It is then washed in water and kept in alcohol for at least a half year.

Before the cartilage is used a piece is cut to fit the defect and disinfected in alcohol for twenty-four hours. It is then implanted without further preparation. Healing occurs promptly and without reaction. In a few weeks the implant is firmly fixed and consolidated with the surrounding tissues.

While it is yet too early to determine whether the tissue will be permanently resistant to resorption, the results so far obtained are most promising.

#### THE IMPORTANCE OF TESTING OCULAR MUSCLES IN THE DIAGNOSTIC DIRECTIONS.—Lee, F. H.: *Am. J. Ophth.*, 1924 s. vii, 838.

Lee calls attention to the anatomical relations of the globe, eye muscles, and orbit to stress the importance of testing muscles in the direction of their major action.

The inner wall of the orbit and the optic axis are practically parallel while the line of the vertical recti forms an angle of 22 degrees with the inner wall and the optic axis. To attain major action of these two muscles the optic axis must therefore swing out 22 degrees.

It is the author's contention that the functioning power of the muscles cannot be tested pro-

perly unless the eye is rotated into a position making the optic axis parallel with the line of major action of the muscle.

#### A STANDARDIZED TEST OBJECT FOR VISUAL FIELDS STUDIES, ELECTRIC ILLUMINATION.—Evans, J. N.: *Am. J. Ophth.*, 1924, 3s. vii, 854.

In an attempt to standardize all of the elements entering into perimetric work, Evans has devised a tube with a cartridge containing a daylight filter, a slot for the various test colors and an unglazed porcelain target at 45 degrees to reflect the light through small apertures. The tube can be used as a test object for perimeter, campimeter and tangent screen.

#### TUBERCULOSIS

Edited by L. J. Moorman, M.D.  
912 Medical Arts Bldg., Oklahoma City

#### WHAT MAY THE "ARRESTED TUBERCULOUS" EXPECT ON RETURN TO INDUSTRY?—W. I. Hamilton, *Journal of the Outdoor Life*, March, 1924.

The most frequent conditions met by the arrested tuberculous patient on attempting to return to industry are, refusal to take any responsibility either through ignorance or fear or because the employer is not "socially minded," or good intentions but misunderstanding and lack of real information as to the demands of the case. In only a few instances is the health of the employee given adequate consideration.

The ideal condition would demand not only good working conditions but frequent and thorough physical examinations in order to detect all cases of early tuberculosis, adequate treatment and instruction in a sanatorium, intelligent after-care at home, utmost co-operation on the part of the patient with both sanatorium and employer, work adapted to the patient's physical and mental capacity, and careful medical supervision while becoming adjusted to that work.

Since only about 5% of the employed are working under conditions even approximating this ideal, it is obvious that agencies other than industrial must look after the patient during the trying period of his return to industry.

#### THE REHABILITATION OF ARRESTED TUBERCULOSIS CASES AT EUDOWOOD SANATORIUM.—Nathan Levitt. *The American Review of Tuberculosis*, August, 1924.

The problem of rehabilitation is one demanding much study in order to prevent the many relapses and to make more patients self-supporting. Disregard and misunderstanding of the physicians' advice are large factors in many of these relapses. Every physician sending a patient to a sanatorium and every one treating him there, should see that he thoroughly understands the nature of the disease and the necessity of an indefinite stay at the sanatorium. Another factor in the production of relapses and one which can be laid at the door of the average sanatorium is allowing patients who are apparently arrested to leave the sanatorium without a graded course of work under instructions as to his future.



Every sanatorium should have a work shop medical supervision and with only the vaguest of where each patient's reaction to work can be tested under the physician who has had charge of him. He can toughen there and either prepare to resume his former occupation or taught a more suitable one. His reaction to work should be made the test of his condition on discharge.

This problem has been solved at the Eudowood Sanatorium, Towson, Maryland, by the establishment of a farm-colony. This work was started in 1908 when a training school for nurses with arrested tuberculosis was also started. Both the farm colony and the training school have been successful from every standpoint, medical, social and financial.

### ZINC STEARATE DUSTING POWDERS FOR INFANTS.

The second report of the Committee on Accidents from Zinc Stearate Dusting Powders appointed by the Board of Trustees of the American Medical Association has recently been published. Copies of this report, with an appendix showing the opinions of thirty-four representative pediatricians on the therapeutic value of such powders, can be obtained on request. Address, Committee on Zinc Stearate Dusting Powders, American Medical Association, 535 North Dearborn Street, Chicago, Illinois, enclosing a self-addressed, stamped envelope.

There were reported to the Committee 131 accidents from the inspiration of zinc stearate dusting powders by infants. Twenty-eight of the victims died. The Committee conferred with representatives of certain distributors concerning the dangers incident to the use of such powders on infants. Following a meeting held at the headquarters of the American Medical Association, these distributors agreed to cooperate by adopting self-closing containers for the powders they distributed and agreed that cautionary labels are desirable. Opinions were secured from thirty-four representative pediatricians concerning the therapeutic value of zinc stearate dusting powders. Thirty-one believe that such powders have no advantage over other dusting powders, that they constitute a hazard to infant life, and that their use should be discouraged.

If that man may be considered truly great who can make two blades of grass grow where only one grew before, what can be said of those who have made conditions such that only one death now occurs where two deaths occurred fifty years ago —*Hygeia*.

### IMPROVED METHOD FOR RABIES PREVENTION

Time was, and not so very long ago, when a mad dog could terrorize a whole community; to be bitten by such an animal was not merely a death sentence, but a sentence to the most horrible of deaths. The resourcefulness and persistent energy of one man, a pioneer, has changed all this. Pasteur's method of preventing hydrophobia was indeed the dawning of a new day. Still, for many years it was necessary for the victims of mad-dog bites to be taken to "institutes" for treatment, and not only failure but injury from the treatment was possible.

A pioneer is most honored by those who catch his spirit and continue to go forward. The Pasteur method has been improved. "Institutes" are no longer necessary. Toxicity has been found to be no essential factor in the immunizing treatment, and Rabies Vaccine is now available that is incapable of injuring the patient, no matter what dose in the "course" is given first or last—all being alike. And, strange to say, this Vaccine has been demonstrated to confer a higher degree of immunity than the desiccated spinal cord originally used.

Our readers are referred to the advertisement in this issue entitled "The Prevention of Hydrophobia," and for more complete particulars to Parke, Davis & Co., Detroit, Mich., who have recently issued a free booklet on "Rabies Vaccine."

### AMERICAN BOARD OF OTOLARYNGOLOGY

An examination was held by the American Board of Otolaryngology on May 26, 1925, at the Medico-Chirurgical Hospital, Philadelphia, with the following results:

Passed .....	137
Failed .....	20

Total Examined ..... 157

The next examination will be held at the University of Illinois School of Medicine on October 19, 1925. Applications may be secured from the Secretary, Dr. H. W. Loeb, 1402 South Grand Boulevard, St. Louis, Missouri.

The first spectacles invented were advertised as allowing free breathing; quite a comment on the early crude eyeglass! —*Hygeia*.

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Meeting Place, Oklahoma City, May 1926.

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# THE JOURNAL

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## ACUTE PERFORATED GASTRIC AND DUODENAL ULCERS\*

STRATTON E. KERNODLE, M.D.  
OKLAHOMA CITY

Perforation of gastric and duodenal ulcer may be acute, sub-acute, or chronic. In this paper we will deal only with the acute, so when perforated is used herein it shall designate acute perforation.

Perforation occurs in about 7 to 15% of the chronic gastric or duodenal ulcers. Sippy<sup>1</sup> believes perforation occurs in about 7% of the ulcer cases. Deaver<sup>2</sup> says, "Acute perforating, peptic ulcers occurs in 15 to 20% of ulcer patients."

In perforated ulcer we are dealing with an acute condition ingrafted upon a chronic ulcer, that is, the ulcer is practically always chronic, the perforation always acute. Moynihan<sup>3</sup> has seen only one acute ulcer in fifty cases of perforation. We have in perforated ulcer, a disease in which the male sex has the monopoly, one series showing fifty-four males and one female, while in our series all were males. In Deaver's<sup>4</sup> series seventeen were gastric and thirty-eight duodenal ulcers. In our series four were gastric and twelve were duodenal ulcers. The average age is about forty years. The average in our series is forty-three years, the youngest patient being twenty-one and the oldest fifty-eight years.

Harrigan<sup>5</sup> believes that there is a distinctive type of ulcer that has a tendency to perforation. Wilensky<sup>6</sup> holds that embolism occurs in the crater of a chronic ulcer with resulting shutting off of the blood supply allowing digestive action of gastric juice to cause an acute perforation.

The majority of cases give a history of previous stomach trouble, either a typical gastric or duodenal ulcer history or a story of a long standing, obstinate "dyspepsia." Often there has been treatment for ulcer.

Occasionally, there is no history of previous gastric distress. Cases have perforated while in the hospital under observation.

In a typical case of perforating ulcer, there are warning symptoms several days prior to the perforation. These consist of an exaggeration of the previous symptoms. The onset is often ushered in following a heavy meal, trauma or straining. In one cases of our series, the attack occurred as the patient was taking an enema.

The first symptom in time and importance is pain in the epigastrium. It is the pain of a ruptured viscus, which is severe, agonizing and almost unbearable. There is no other pain that is as excruciating. The patient is pale and prostrated, his face is anxious and there is a frightened expression in his eyes. Beads of sweat stand out on the brow. The breathing is short and rapid, deep inspirations causing severe pain. He is motionless, holding his entire body rigid, resenting being moved. His requests for relief are urgent and he is loathe to be examined, as the least pressure is painful. The abdomen is normal contour. The muscular rigidity is of the highest degree—board-like, never relaxing, persisting thus until near death in the fatal cases. It is unaffected by posture or pressure. In the gastric cases an epigastric area of special tenderness may be found. This is not true in the perforated duodenal ulcer cases, the tenderness in the latter being especially in the epigastrium and lower right quadrant. Vomiting is often present but is not constant. Diminished or absent liver dullness is found many times.

From the appearance of the patient one would expect to find him in marked shock. Such is not the case. The patients seen early are in especially good condition. The pulse is rarely above 90. The temperature is normal or sub-normal. The blood pressure is practically unchanged. The leukocyte count is raised only slightly, the average W.B.C. being 13,000. The respirations are rapid and shallow. This condition of pulse, blood pressure and temperature

\* Read before the Section on Surgery and Gynecology, Annual Meeting, Oklahoma State Medical Association, Tulsa, May 12, 13, 14, 1925.

does not continue long before a change is noticed. We should not be confused and make the error of delay by waiting to see if there will be a raise in temperature or an acceleration of the pulse, as it is during the early stage that surgery gives the best results.

The mainstays of the diagnosis, then, are a well taken history, and 2 abdominal signs—that is, board-like and parallel tenderness. There are few other conditions in which the history is more important.

Lohr <sup>7</sup> observing one hundred thirty-two cases has concluded that the first twelve hours the peritonitis is chemical; the acid gastric juice prevents growth of intestinal bacteria. After this period, alkalescence prevails, allowing pathogenic intestinal bacteria to flourish producing bacterial peritonitis.

Deaver obtained twenty-three sterile cultures out of thirty-four cases; Brenner <sup>8</sup> obtained eleven negative cultures out of fifteen cases. The concurrence of opinion

St. Anthony's Hospital, January 1, 1915, to May 1, 1925.

TABLE SHOWING CASES OF ACUTE PERFORATED GASTRIC AND DUODENAL ULCERS

Case	Age	Date	Location of Ulcer	Operation	Condition 1925
1	54	1915	Gastric, anterior surface pyloric portion	Inverted Closed Drainage	Good, no gastric symptoms
2	58	1916	Duodenum	Appendectomy	Death
3	41	1916	Duodenum, anterior right	Closure Drainage	Incisional hernia, return of ulcer symptoms.
4	33	1918	Duodenum, anterior lateral	Closure with Posterior gastro-enterostomy Drainage	Good, no distress
5	54	1919	Gastric, anterior pyloric surface	Margin of Ulcer trimmed, Ulcer Closed No drainage	Recovery
6	21	1921	Duodenum, anterior right, 2nd portion	Ulcer invaginated. Posterior no loop, gastro-enterostomy No drainage.	Recovery, no distress
7	42	1921	Duodenum, anterior surface right	Suture-posterior gastro-enterostomy drainage.	Recovery
8	56	1922	Gastric	None	Death
9	57	1923	Duodenum, near pyloric	Suture, no loop, gastro-enterostomy, no drainage	Condition satisfactory
10	41	(May) 1924	Duodenum	Suture only, drainage.	Present condition not known
11	35	(May) 1924	Duodenum, 2nd portion	Suture only, drainage.	No symptoms at present
12	41	(Dec.) 1924	Gastric	Suture only, drainage.	No symptoms
13	27	(Sep.) 1924	Duodenum	Suture only no drainage	No symptoms at present
14	52	1924	Duodenum	None	Death
15	41	1925	Duodenum	Exploration Liver Abscesses	Death
16	33	(Apr.) 1925	Duodenum	Simple suture drainage	Still in the hospital

The X-ray is useless in this condition and the laboratory is of only negative value in the early part of this disease.

The differential diagnosis is often difficult—especially is this true in those cases that give little or no history or gastric distress prior to the perforation.

The most common error in diagnosis is confusion with appendicitis. In one series of forty-nine cases of perforated ulcer, nineteen had a pre-operative diagnosis of acute appendicitis. In one fatal case of our series, the same mistake was made, the patient being operated for an acute appendix.

is that negative cultures are obtained in early cases in the majority of perforations.

It is a belief among surgeons that perforation cures ulcer, but careful investigation fails to prove this. It is true that some cases will be cured by simple suture, as two of our series. But perforation is not a guarantee of cure and we have no means of knowing which case will heal and which will not.

The treatment is of course, always surgical. The earlier the better. Delay means disaster. Early surgical intervention is desired in those acute abdominal conditions that simulate perforated ulcer.



Deaver, in following twenty-one cases of gastric and duodenal perforated ulcer, found that only two were unimproved, and these were both cases in which a gastro-enterostomy was omitted. One of these was a gastric and one a duodenal ulcer, both were cured by secondary operation.

Early operation is of the most importance. The surgical procedure is secondary. Treatment—the procedure may be one of three: 1. Closure of perforation. 2. Closure of perforation with gastro-enterostomy. 3. Radical resection of ulcer bearing area. (We may dismiss this latter from our consideration as it is unjustified in acute perforation.)

Surgeons are not agreed as to which is the best operation. Simple closure is not without its advocates, although a larger

and died, the perforation not being closed. The tendency is away from peritoneal drainage, especially in early cases, although Guthrie in his questionnaire found that one hundred one out of one hundred thirty-seven surgeons drained after operation for perforated ulcer. The type of drainage used should depend on time of operation and the amount of spilling of material, the delayed cases demanded ample drainage on account of peritoneal contamination. In this series drainage was used in out of twelve cases in which ulcer was operated.

Results: Gibson <sup>9</sup> reports seven out of twenty-eight, or 25%, duodenal ulcers operated by suture required re-operation, but only one out of twenty-eight gastric ulcers required re-operation.

#### RESUME

##### Four (4) Gastric Perforations

Three	(3)	Suture only	Condition good
One	(1)	Death	Non-operative

##### Twelve (12) Duodenal Perforations

Four	(4)	Suture, plus gastro-enterostomy	Present condition is satisfactory
Three	(3)	Suture only	Two (2)—Present condition satisfactory
			One (1)—Return of ulcer symptoms
One	(1)	Suture only	Present condition unknown
One	(1)	Suture only	Patient in hospital, recent operation
Three	(3)	Deaths	(No operation (Appendix removed—wrong diagnosis (Multiple liver abscesses. Explored.

percentage of surgeons prefer closure, plus gastro-enterostomy. Wilkensky states that if gastro-enterostomy is of no, or doubtful value for non-perforating ulcer then it is of no, or doubtful value for perforated ulcer, then adds that he believes (along with Continental Surgeons) that gastro-enterostomy is not a satisfactory operation for any ulcer and advocates a resection.

Deaver aptly states that no surgeon would operate on an ulcer by simple suture in the pre-perforative stage, but some are content with simple suture as a cure after perforation.

It is agreed that gastro-enterostomy in the early cases does not increase the mortality—so this factor cannot be argued for or against a certain operation. There were no deaths in our series in which ulcer was operated either by closure or closure plus gastro-enterostomy. One case was operated for a mistaken diagnosis of appendicitis

Smith <sup>10</sup> reports forty-one duodenal ulcers with simple closure and four required second operation.

Stewart and Barber <sup>11</sup> reported twenty-four cases, treated by simple closure, none requiring any other operative procedure.

Mayo <sup>12</sup> advocates closure with gastro-enterostomy.

Lewison believes that gastro-enterostomy should be done wherever possible.

In McCreery's <sup>13</sup> series twenty-two per cent of gastric perforations and sixty per cent of duodenal treated by simple suture required secondary operation.

Eugene Poole <sup>14</sup> observed in his series that 33 1-3% treated by a simple closure required second operation, but advocates simple closure at the time of perforation with a secondary operation if required.

We have analyzed all the cases of perforated gastric and duodenal ulcer admitt-

ed to St. Anthony's Hospital, Oklahoma City, Oklahoma, from January 1, 1915, to May 1, 1925. During this time there have been sixteen cases—four gastric and twelve duodenal cases. The mortality has been four cases or 25%.

Quite an interesting point has been that of all the cases operated on for ulcer there has been no post-operative death. Most of these were operated on early after the perforation, but there are a few that had gone more than twelve hours after perforation.

In those cases in which a gastro-enterostomy was added to a simple suture the patients suffered no ill effects from this added surgery.

The end results we are unable to give on all cases, but have followed up reports on three gastric and seven duodenal cases. Some of these are less than a year post-operative, one is still in the hospital. We find that three of the gastric cases, or 100% are well and are free from symptoms at this time. All of these were operated on by simple suture. Of the duodenal perforations three died. In none of these was the ulcer operated on. In one case the present condition is not known, and one case is still in the hospital. Of the remaining seven, four were treated by suture plus gastro-enterostomy, all are well with no return of symptoms. Three were treated by simple suture; two are well and free from symptoms; one has return of ulcer symptoms. That is, 33 1-3% had return of symptoms.

While these cases are not conclusive and is a small series, still they are suggestive that perforated gastric ulcers treated by suture only may cure, while in perforated duodenal ulcer—suture plus gastro-enterostomy gives better results.

Between January 1, 1915, and May 1, 1925, there have been twenty-four cases of chronic ulcer of the stomach or duodenum operated at St. Anthony's Hospital, Oklahoma City, Oklahoma. During the same period there were sixteen acute perforations of a chronic ulcer—that is, 40% of these ulcers were admitted in the perforative stage.

The mortality of perforated ulcers in this series has been four cases, or 25%. The operative mortality has been nil.

The operative mortality in the non-perforative cases has been one case, or 4%.

The question naturally arises—if the perforative cases had been operated be-

fore perforation what would have been the result?

Perforation of an ulcer after gastro-enterostomy is very, very rare, consequently we may assume that operation would have prevented perforation.

#### CONCLUSIONS

1. Acute perforated gastric or duodenal ulcer occurs in 7 to 15% of chronic ulcers.
2. The previous history is important.
3. It is pretty well agreed that perforation does not cure the ulcer.
4. It is universally agreed that early operation is of primary importance.
5. The operation of choice in our opinion is closure with gastro-enterostomy. This is especially true if dealing with a perforated duodenal ulcer.
6. Gastro-enterostomy does not increase post-operative mortality in early cases.
7. The peritonitis of perforated ulcer is chemical in the early hours, changing to bacterial after about 12 hours.
8. Drainage is practically always indicated except in very early cases.
9. The mortality of perforated ulcer is very high.
10. Too many ulcers are coming to the surgeon in the perforative stage.

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*Discussion:* John W. Riley, M.D., F.A.C.S., Oklahoma City.

In the discussion of an "ulcer perforation" it must be distinctly understood in the beginning, that the subject for discussion, "Are the symptoms related entirely



to perforation, and not to the reactive peritonitis which occurs hours after the perforation and are due to a bacterial involvement of the peritoneum."

The discussion must also eliminate the perforative peritonitis symptoms that are evident in the sub-acute perforative lesion; although in some instances this type of lesion may develop suddenly into an acute process.

Perforation of a "gastro-intestinal ulcer is a condition that is always to be thought of and much to be dreaded. It is one of the most tragic episodes that occurs in surgery. The patient may be stricken in his office, in the theatre, on the train, on the street, and very often while confined as a patient in the hospital.

While attending a Clinic at Cook County Hospital at Chicago, in the fall of 1923; three specimens of perforated ulcer were shown. These patients had died while being treated in the medical wards of the institution. The physician giving the Clinic, said that, "there was an average of four deaths a month, occurring in the medical wards of the hospital." An elderly physician sitting by my side, said that, "he knew of seven recent cases in a Philadelphia Hospital." It seems to me that this is a fearful conviction of the medical man who stands by and allows a catastrophe like this to occur.

Nearly all of these patients have had symptoms for years and usually have had as many different varieties of treatment as "Heinz has pickles", and it seems to me the irony of Fate, that an individual should die from an ulcer, that has been pleading its cause and begging for relief for years.

In the ulcer perforations that I have seen, there has been always a long history of gastric disability. Suddenly, as out of a clear sky, he is stricken with an almost intolerable agony; an agony that is so gross that the individual is unable to move. The abdomen is held as if in a vise. The transverse striations of the recti can be plainly palpated. The pulse is not particularly increased, and the temperature may be normal or sub-normal. When the change occurs in the pulse and temperature, a peritonitis is developing. The proper time for operative remedies is before a bacterial invasion of the peritoneum occurs.

Statistics from various clinics very pointedly show that it is immaterial what operation is done in the early hours; recovery is the usual outcome.

As to operation: It seems to me that the best results have been obtained where the ulcer is sutured and gastro-enterostomy is done. There are some who believe that only suture of the perforation is necessary, but every surgeon who has had much experience with ulcer perforation will find it necessary to do a secondary gastro-enterostomy in quite a large percentage of these cases. It is presumed that the question of suture alone, or suture plus gastro-enterostomy will vary with the individual surgeons' experience.

Experience with gastro-enterostomy as a remedy in the ordinary non-perforating ulcer: I take it that the best statistics that have ever been shown by any man, are those of "Balfour", in which he reports that amazing number of one thousand gastro-enterostomies for ulcer after an interval of ten years. In this series, Balfour found 92% of these patients relieved of their symptoms. This inclines me to believe that a gastro-enterostomy is a good measure for an ordinary ulcer.

Therefore: If it is of so much benefit to an ordinary ulcer; is it not good logic to believe, that if the patient's physical condition is such as to stand the additional gastro-enterostomy, that it would be better to do it?

#### SOME DIFFICULTIES IN THE DIAGNOSIS OF THE DISEASES OF THE STOMACH, WITH SPECIAL REFERENCE TO EXTRA-GASTRIC CAUSES.\*

LEONARD C. WILLIAMS, M.D.  
PAWHUSKA

The importance of this subject, the very wide scope it covers, and the everydayness of its occurrences in the general Practitioner's office, the many mistakes in diagnosis that it may help to correct, was brought to my attention by the following case, which is the real reason for my writing this paper. I will say to start with that the diagnosis is yet unknown. I suspected a Gastric Carcinoma and advised an exploration operation for diagnosis, so referred her to a prominent Surgeon, who made a tentative diagnosis of some diseases of the Pancreas and advised an exploratory for definite diagnosis, but first called in a

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Medical Consultant who makes a tentative diagnosis of Gall-Bladder disease, but advises exploratory.

As patients husband nearly died from a Gall-Bladder operation she refused an exploratory and came back home. I was not satisfied as to any of the previous diagnoses. I called in Specialists on the Stomach and Intestines who said we were dealing with a chronic appendix and Spastic

Urine		Blood	
Amt.		Hgh.	85%
Color	Amber	R.B.C.	4,550,000
Appear.	Clear	Index	.9
React.	Acid	Size	Normal
Sp. G.	1.025	Shape	"
Albumen	0	Color	"
Glucose	0	Blast.	0
Acetone	0	W.B.C.	5450
Diacetic	0	P.	72
Indican	0	L.	25
Diazo		L.M.	0
R. B. C.	0	T.	2
W. B. C.	Occas.	E.	0
Casts	0	B.	1
Cyst	0	Other cells	0
Organisms	Few	Platelets	Few
Cells	Few Squa-Epithelial	Parasites	0

#### Feces

Color	Brownish
Consist	Semi-solid
React	Neutral
Mucus	0
Pus	0
Blood	0
Fat	Small amount
Bile	XXXX
Bact.	Many
Parasites	None found

#### Gast. Cont.

Amount	Ewald
Color	40 CC.
Consist.	Grayish
Mucus	Limpid
Pus	Large amount
Blood	0
Food	Small amount
Bact.	Many
Total acid	1
Free HCL.	0
Comb. acid	1
Lactic acid	0

Colitis and advised removal of appendix and proper dietary management after operation.

On August 16-24, Patient came to office.

#### HISTORY OF PATIENT

Female, 39 years old, 5 ft., 6½ in. high, weight, 138 lbs. Chief complaint, pain at angle of left Scapula coming on about 4-5 A. M. every morning and wearing off about 11 A. M. She says this is the only complaint, feels fine every other way. But on closer questioning brings forth the fact of Chronic Dyspepsia, gas and palpitation, numerous hot and cold flashes, sometimes leg and headache. Periods irregular, has missed as many as 6 months, flows scant for one day, when she does menstruate. This has been her history since she started menstruating at age of 13, been

married fourteen years, never been pregnant.

Past History—Negative.

Family History—Mother died of cancer of stomach.

Physical Examination—Head and neck, teeth and tonsils negative. Pulse normal B. P. 130-80.

Heart—Not enlarged, no murmurs.

Lungs—Negative.

Abdomen—No tumors or masses palpable, no points of tenderness except over McBurneys.

Female Examination—Negative, except an infantile uterus, no Leukorrhea or history inflammations.

Laboratory Findings—Wassermann-Negative.

Fluoroscopic examination and X-Ray with barium meal shows no abnormality of contour, greater curvature lying at level of umbilicus. Cap well formed, no excessive peristalsis, no indenture, stomach freely movable.

Gave Dil. HCL. bromides and whole ovary, Jan. 10, 1925. Patient has now been under my observation about 6 mos., with no improvement, only indigestion relieved, in fact has been slowly getting worse. During the time I have taken four Gastric analyses, two complete X-ray series and numerous fluoroscopic examinations, all with the same findings of normal outline of stomach and absence of HCL. with occult blood. The chief complaint of pain at angle of left Scapula is still present but has begun to radiate around like a Herpes Zoster and even penetrate straight through to left Hypochondrium which is now tender to pressure. Gastric analysis at this time shows no free HCL. total acidity 10; blood present, lactic acid and excessive mucous. X-ray pictures and fluoroscopic still negative no tumor or masses in abdomen palpable. It was at this time I insisted on consultation and advised Laparotomy for diagnosis and the consulting Surgeon and Internist looked her over as stated before and Patient came home. I then put her to bed for two weeks, as she was nervous, I thought absolute rest and relaxation might help conditions; at end of two weeks, no improvement so I called in a Gastro-Enterologist, who said "Spastic Colitis with chronic appendicitis." And advised appendectomy, but as patient refused, we continued her treatment in bed on diet and medicine for Spastic Colitis.



At end of two more weeks patient refused medicine and diet, and got up, her condition was improved. I tried to force an operation, and I told her, if for no other reason let me operate so I can make a diagnosis and complete my paper for the State Medical, but all I could get was a promise for some time this month. The variation of diagnoses on this case brought home to me the fact of the difficulties in diagnosis, when the stomach is concerned and the great possibility that the cause is outside of the stomach, for we know that the stomach is said to be the mouthpiece of disease of any portion of the body, especially the organs of the abdomen.

Mayo has told us that only 20 per cent of cases presenting gastric symptoms are due to disease of the stomach itself. That 40 per cent of the cases are due to other intra-abdominal causes and that the remaining 40 per cent have their origin outside of the abdominal cavity.

The extensive and complicated nerve supply to the stomach places it in direct or indirect communication with all of the vital organs. This is especially true as regards the gall-bladder and appendix, with which it is interconnected by nerve filaments as a result of their having similar embryonic origin. The innervation of the stomach by branches of the vagus and great sympathetic abdominal plexus is a mechanism so delicate that the slightest stimulus, as the sight or odor of food, will produce gastric secretion. Understanding this, we realize why the stomach is so often disturbed by pathological conditions outside of itself.

Everyone recognizes that pain anorexia, nausea, vomiting and gastric distress are among the very common symptoms of acute appendicitis. These symptoms in a milder but more persistent form are found in chronic and recurrent appendicitis and reflexly or otherwise give rise to the group of symptoms commonly called chronic dyspepsia.

Aaron has described pain in the epigastrium induced by pressure over the appendix in chronic appendicitis, and believes this to be due to spasm of the pylorus, this he proved by bismuth meal and X-ray.

Fenwick believes the constant excess of free Hydrochloric Acid gives rise to spasms of the Pylorus and also excites a violent gastritis. He believes that 12 per cent of the cases of hypersecretion are due to disease of the appendix, and that there

is usually an increase both in quantity and acidity when active irritation of the appendix is present.

Paterson believes that the appendix influences the gastric secretion, but thinks it is due to intestinal stasis rather than pyloric spasm.

In gall-bladder trouble we may see the typical picture of chronic functional dyspepsia, fullness and discomfort after meals and especially that bane of the gastroenterologist gas in very large amounts, or in another case, a picture so like that of gastric cancer with its lack of appetite, loss of weight, etc., that even the persistent absence of occult blood and negative X-ray pictures, we often are in doubt, and only the operation definitely determines that we are dealing with a case of gall-stones or chronic cholecystitis with no local manifestations. In both these types, especially among fat women after early middle life. I find an achylia or at least an achlorhydria is the rule.

As contrasted with gastric or duodenal ulcer, an attack of gall-stones lasts a few hours, is most abrupt and severe; an acute cholecystitis lasts a few days and is less severe while a gastric ulcer is a chronic condition and is least severe.

In gall-bladder disease these referred gastric symptoms undoubtedly of vagus origin, are peculiarly interesting in that they have a definite cardiac equivalent. All the signs and symptoms of cardiac distress being quite often found in this group of cases, symptoms which entirely disappear with a realization that the heart trouble was functional and not organic, after surgery on the gall-bladder. A very wise Clinician once said, "When a patient complains of indigestion with no apparent cause, always think of the possibility of beginning myocardial insufficiency; when he or she complains of cardiac symptoms, always realize the probability that these symptoms are of gastric origin."

In making a differential diagnosis between diseases of the biliary tract and the appendix on one side and uncomplicated gastric and duodenal ulcer on the other, we can often get valuable help by remembering that in a duodenal or gastric ulcer, pure and simple, we should not have jaundice, should not have infectious headaches, should not have history of rheumatism, should have no chills or fever. If you ask yourself the question, Am I dealing with an infection or a non-infectious process? It will help make the diagnosis.

Crile has pointed out that in abdominal visceral, pain is caused by tension of the muscular wall of the part and not by irritation of the mucosa. He points out that cutting of the mucous membrane causes no pain, while stretching or tension of the walls of the organ produces pain. Thus the pain of appendicitis, cholecystitis, would depend on the overtonicity and tension of the walls of the affected parts. The character of the pain can often be differentiated if we remember that a colicky pain is relieved by pressure while an inflammatory pain is increased.

The pathology of the cord may simulate diseases of the stomach, as tabes, lues and vascular disease.

The nervous system plays a prominent role under this etiology, for the neurotic is the bug a boo of the general Practitioner as well as the Specialist, and the Surgeon has operated many to return not only unimproved but with the added shock of the operation. For the so-called hysteric simulates most any gastric symptom.

The differentiation of the functional from the organic is a real art, and we should have more clinical examinations and clinical study, and not depend so much on the laboratory for diagnosis.

A new field is the Endocrine glands, what we may expect from the study of them is unknown. Would the results in the above case have been different if we had fed Ovarian Ext., to her many years ago?

The gastric picture is interesting in both acute and chronic pancreatitis, also the periodic attacks of severe nausea and vomiting in cases of marked retroflexion of the uterus with no local symptoms. A very common mistake in diagnosis is the twisted pedicle of an ovarian cyst, with only upper abdominal symptoms.

Acute and chronic infectious diseases such as Typhoid fever, Pulmonary T. B. and Syphilis all have gastric manifestations.

Every one of you have had patients complaining only of gastro-intestinal symptoms and without cough or dyspnea, chills, or sweats where physical examination shows the gastro-intestinal tract to be sound, but the lung with T. B.

Cases of intestinal parasites or pernicious anemia may fool us and we think we are dealing with a gastric cancer.

I might go almost indefinitely reciting portions of the body where the true nature

of the underlying pathologic condition was entirely masked by symptoms referred exclusively to the stomach so I assume the complaining stomach to be innocent until it has been proven guilty, which will result in the search for extra as well as intra-gastric causes for the symptoms complained of.

## SIGNIFICANCE OF PAIN IN RIGHT LOWER ABDOMEN\*

L. J. STARRY, M.D.  
OKLAHOMA CITY

In bringing to your attention this particular symptom of abdominal pathology, I am not unmindful of the great amount of literature which has been presented under a similar title in the past. Notwithstanding this fact, however, there remains much inspiration and stimulation for such a theme due to the many patients who present themselves with right lower abdominal pain as their chief and only complaint. This paper, more or less empirical in its presentation, deals only with surgical diagnosis and is presented with the idea that by placing more emphasis on symptomatology we may more accurately diagnose and therefore more successfully treat, abdominal conditions in general. You will no doubt agree with me that there is more reason for diagnostic progress in the lower right abdomen than elsewhere. In order to limit the scope of this paper, the right lower abdomen will be defined as including the abdominal wall, the extra-peritoneal spaces and the peritoneal cavity, with such contained viscera as the terminal ileum, cæcum with its appendage, the ascending colon and the distal half of the ureter. The pelvic viscera are not included as strictly speaking they are not normally within the abdominal cavity.

I cannot agree with the expressed opinion that pain is of no significance in considering a pathological condition; if we are to succeed in obtaining the patients' viewpoint, we must believe with them that pain is all important. It will be my purpose to review briefly the anatomy of the structures which may produce pain, the physiology of the pain, the practical application of this basic and fundamental knowledge and finally present two case

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histories which typify the chronic sufferer of the right lower abdomen.

That portion of the abdominal wall under consideration is supplied by the 8th, 9th, 10th and 11th thoracic nerves, which run for the most part between the internal oblique and transversalis muscles. Branches of these nerves are found in the areolar tissue just outside of the peritoneum,—an extra-peritoneal coat. The parietal peritoneum, according to Mackenzie<sup>1</sup>, possesses no nerve supply. It is however rarely that the peritoneum is stimulated without the stimulation of the extra-peritoneal coat, so closely applied to it and which is extremely sensitive to pain. The sensory nerve supply to the viscera under consideration is thus the sympathetic fibers which originate in the plexuses of Auerbach and Meissner. Neither the vagus or the splanchnics are directly connected with these viscera. The sympathetic fibers lie in the mesentery with the blood supply and as afferent fibers reach first the superior mesenteric plexus since this portion of the alimentary canal is supplied by the superior mesenteric artery. From the superior mesenteric plexus there is a direct connection with the coeliac plexus in the epigastrium. The ureter is supplied by the spermatic plexus of the sympathetic which reaches the coeliac thru the abdominal plexus.

Little need be said in regard to the anatomical structure of the viscera of the right lower abdomen. Mention should be made, however, of the ileo sphincter which is one of a series of gastro-intestinal sphincters all controlled by the efferent sympathetic fibers and first described by Elliott and Smith<sup>2</sup>. This ileo sphincter is located just proximal to the ileo-caecal valve and stimulation of sympathetic fibers relaxes this sphincter with the others in the series. The caecum may be one of three types; foetal, wherein it is symmetrical and conical, the vermiform process leading off from the apex of the cone; infantile, where the lateral wall is most prominent, the process coming off more abruptly, and finally the adult or so-called normal type which shows the lateral wall projected downward to form the true end of the cul-de-sac, the medial wall dragging behind in the process of development. The caecum is at once the most dependent and most freely movable portion of the large bowel. The right ureter lies upon the psoas muscle and in the sensitive extra-peritoneal areolar tissue, extending downward and medially. It

thus passes medial to the caecum on its way to the side wall of the bladder.

Pain is produced by stimulation of nerves which have the ability to transmit stimuli to centrally located receptive areas. Stimulation is not confined to the terminal fibers but may be produced anywhere thruout the course of the nerve. Not only the cerebro-spinal nerves but also the afferent fibers of the sympathetic system are capable of stimulation and conduction of painful impulses. The normal viscus does not give a sensation specifically but adds to the general feeling of well being. As a result of disturbed structure or functioning of a viscus we have the initial response thru the sympathetic system. The end plexuses are stimulated and sensations are continually sent to the plexus higher in the chain where they are stored. In the case of these particular viscera, the sensations are stored in the superior mesenteric and aortic (for the ureter) plexuses until these higher plexuses become so sensitive that the stimuli break thru and reach the coeliac. It may be said that the superior mesenteric is a mirror reflecting all the pain producing conditions within the right lower abdomen and in turn focusing its rays on to the coeliac plexus. Stimuli passing thru these plexuses reach the spinal cord thru communicating rami and some are then propagated out thru the spinal nerves in the production of the "viscero-sensory reflex". One must distinguish between the two different types of pain,—the somatic pain described by Ross<sup>3</sup> which concerns the cerebro-spinal nerves and the visceral pain confined to the viscus and transmitted by the sympathetics and brought into consciousness without propagation. It is common for the patient to describe visceral pain as "deep" or as "middle" pain. Thus the physiology of the production of pain is clear and definite; the perception and interpretation of pain on the other hand, is as different as the individual who experiences it. Psychological causes such as bereavement, anxiety, frequently some surgical procedure, will bring a pain into consciousness without appreciable change in the pathology. It must be realized that with increasing civilization, the threshold to pain becomes lowered. What would be of no consequence to one of a sanguine disposition, would be extremely distressing or unbearable to the neurotic.

In regard to pain of the abdominal parietes, the common causes of trauma and

other external factors need only be mentioned. It should not be forgotten, however, that posterior root disease and tuberculosis of the spine may produce typical pain due to the involvement of the spinal nerve trunks at their source. Traction on the parietal peritoneum from any cause, direct or indirect, by pull on the closely applied extra-peritoneal layer will produce somatic pain. Should the serous tissue alone be irritated, there is no sensation. Within the abdomen we may have dragging down and tension on surrounding tissues which will produce painful sensations. As an instance, the dragging of the mesentery of the dependent ilium and cæcum, due to ilio-cæcal stagnation, makes ligaments of suspension of the nerve fibers running between the layers of the mesentery and is a source of persistent painful stimulation. The ureter because of its association to the sensitive extra-peritoneal areolar tissue will, if dragging is permitted, as it is in certain degrees of movable kidney, cause severe pain involving, in this instance only spinal nerves. A weighty boggy cæcum may indirectly cause tension on the ureter.

From this consideration of the spinal nerves in the production of pain in the right lower abdomen, let us now pass to the role of the sympathetic nerves. It may be laid down as a dictum, since it has been definitely proven,<sup>4</sup> that there is only one cause for stimulation of afferent fibers and therefore one cause for pain in hollow viscera and that is distention. Such distention is due to an increase in intravisceral pressure and may or may not be accompanied by smooth muscle spasm. As an instance of distention we have that produced by the fluids introduced in an enema,—pain is thus produced which is instantly relieved by the expulsion of fluid and the relief of the tension. All of the viscera located in the lower right abdomen are hollow viscera, hence we may deduct the fact that intra-abdominal pain in such an area is due to the distention of the viscus involved. Such distention may or may not be accompanied by inflammation as a causative factor. It has been very clearly pointed out that pain accompanies the distention above ureteral stricture without the presence of active inflammation. The terminal ilium, cæcum with its appendage, and the ascending colon likewise may be chronically distended due to a variety of causes and may produce the same pain interpreted and propagated in

the same manner. A generalized sympathetic stimulation will inhibit sphincter action and peristaltic waves and thereby cause cæcal delay and stagnation from physiological causes only. It should be emphasized finally that these various causes may exist in a latent form until susceptibility becomes exaggerated when they are brought into conscious painful conditions and remain to the great distress and discomfort of the individual.

There follows two case histories which are typical of this condition:

1. Mrs. H., white female, age 33, complains of pain in the right lower abdomen of several years duration. It is constant and aching in character, at times severe enough to incapacitate her. It bears no relation to meals,—at times is propagated to the epigastrium and usually relieved by lying down. She suffered from constipation as long as she can remember. Has had three operative attempts to relieve the pain: appendectomy, salpingo-oophorectomy and hysterectomy. Following each operation, she experienced relief for a varying length of time. She is extremely nervous, introspective, and irritable. Examination shows a very poorly nourished young lady with normal pulse, temperature and respirations. The blood-pressure is 115 over 80. Abdomen shows scars of former operations, costal angle is hyposthenic, abdominal walls flaccid and poorly developed. There is moderate distention. Diffuse tenderness is present over the abdomen,—especially marked in the right lower. There is point tenderness over both Morses and McBurneys points. There is palable gurgling or borborygmus over the cæcum. The X-ray shows paosis of the transverse colon and stomach with coecal delay and stasis.

2. Mr. C., white male, age 44, has had lower right abdominal pain for ten years gradually growing worse. Eight years ago he was advised to have the appendix removed but refused. At times the pain becomes very severe and is propagated to the epigastrium. There is no relation to meals but the pain is aggravated by constipation from which he suffers constantly. There is no nausea or vomiting. He worries a great deal about business and family affairs and is constantly under high nervous tension. He has lost twenty pounds in weight the past three months following removal of tonsils. Examination shows a sthenic type of costal arch,—flaccid abdominal walls without scars. There is



marked local tenderness over the cæcum with borborygmus and also epigastric tenderness. The descending colon is palpable, rope-like and tender,—there is tenderness over superior and inferior mesenteric plexuses. X-ray done at Rochester, Minn., showed marked dilatation of the caecum with stasis.

In discussing the first case one is tempted to paraphrase a text of our brethren of the cloth and say, "By their scars, ye shall know them." Approximately 80% have scars of McBurney, right or midrectus incision. The second case had repeatedly declined operation, altho there were many opportunities to submit. Both had epigastric tenderness due to the fact, I believe, that the superior mesenteric plexus had become so irritated by repeated assaults that the stimuli had broken thru to the coeliac plexus. Both individuals had a lowered pain threshold, were inclined to be introspective and hypochondrical. The first patient showed many evidences of infantilism and I believe she had an infantile type of cæcum.

In conclusion, let me say that pain is purposive; either visceral or somatic pain excites a reaction which is also purposive. Pain should be regarded as a friend of both the patient and the diagnostician, not as an enemy to be entirely annihilated by the loaded syringe. The Utopian idea of medicine is that there shall be no more pain, yet that mythical state shall never be reached unless we can more accurately and therefore more effectively trace the origin of pain. He who attempts to understand pain without taking into consideration the sympathetic supply of the viscera, will find many inexplicable conditions confronting him, and the mysteries of diagnosis ever increasing. Let us depart from the usual summarizing and allow me, please, to tell at least one reason for this paper. I am first of all not quite convinced that appendicitis per se does not cause pain in the right lower abdomen. I am not convinced of the clinical entity of chronic appendicitis. I was inquisitive to determine whether or no a paper on pain in this portion of the abdomen could be prepared without mentioning appendicitis. Taking a plan from noted generals in battle who start a small offensive to detract attention from a larger, much more important one, I endeavored to emphasize the conditions in the right lower abdomen which might cause pain, without reference

to the murderous term of chronic appendicitis.

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### THE ROENTGEN DIAGNOSIS OF DUODENAL ULCER\*

S. C. VENABLE, M.D.

TULSA

Duodenal ulcer, though long recognized as a clinical and pathological entity, has received its proper attention and careful differential diagnosis only within the last decade. The earlier investigations were conducted in the clinics of Europe, and hence this group of pioneer observers has been styled the Continental School. To such men as Haudek, Haenisch, Reider, Holznecht, Rosenthal, etc., belongs the credit for the first definite and recognized work in this most interesting field of diagnosis. Almost of necessity, however, due to their large clinics, lack of adequate funds, and imperfect apparatus, they gradually built up a series of functional signs, observed with the fluoroscope, which is today known as the indirect method of examination.

But the scientific medical world awaited, as it has in many other lines of endeavor, the brain child of an American genius to visualize the actual ulcer area itself. The brilliant researches of Lewis Gregory Cole of New York established on a firm and enduring basis, by means of "serial radiography", the definite and localized character of this all too frequent lesion. Cole's work was initiated in the years just prior to the World War; and although he shows a tendency to minimize, if not indeed to practically ignore, the fluoroscopic findings in the diagnosis of duodenal ulcer, yet his conclusions, in the main, have stood the acid test of ruthless investigation by capable roentgenologists thruout the world. Today the direct or American School champions the generally accepted standard of diagnostic excellence.

Duodenal ulcer has been demonstrated in late years to be of much more frequent occurrence than was formerly supposed and

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this definite knowledge has been largely due to the visualizing of this condition by the roentgenologist. N. J. Nessa of Sioux Falls, S. D., reports a series of 30,000 cases of gastro-enteric pathology, gleaned from recent medical literature of the United States, among which he lists 15% of proven duodenal ulcers. Richard A. Rendich of Brooklyn, N. Y., quotes a compilation of 1916 positive gastro-intestinal diagnoses by means of the Roentgen ray from the files of Bellevue Hospital, over a period of three years, in which 314 duodenal ulcers were noted.

Before entering upon a discussion of the pathology involved in duodenal ulcer, it may be well to glance hastily at a few anatomical points of interest. As is familiar to all, this part of the small intestine is divided arbitrarily into a triad; namely, the first portion, the cap, or bulbus duodeni, the second or descending portion, and the third or the horizontal portion. The first of these divisions is a rather unique organ, due to the fact that it is the transition point from stomach to intestine and is known to possess characteristics of both. The duodenal mucous membrane is smooth on account of the absence of valvulae conniventes and its musculature is, in a general way, but the direct continuation of that of the stomach. The thinner longitudinal muscle bundles form the outer coat, through which in many locations the heavier circular fibres may be made out and its greatest density is found at the lesser curvature border of the cap, a fact that will be referred to again when considering the mechanism of the niche deformity. The bulbus duodeni is supported by the duodeno-hepatic ligament and into the composition of this structure some of the longitudinal muscle fibres of the duodenum enter.

In order to make a satisfactory examination of any portion of the gastro-intestinal tract, a suitable contrast medium is the roentgenologist's first essential. Many and varied mixtures were employed before a uniformly acceptable meal was hit upon. The earlier workers used a combination of bismuth and cooked cereal, later substituting barium sulphate for the first ingredient. It was found, however, after repeated trials, that this composition did not round out the duodenal cap sufficiently to make an accurate observation of its contour. Hence these investigators sought a liquid base for their contrast medium and eventually arrived at our generally em-

ployed malted milk or buttermilk-barium sulphate-bicarbonate of soda-acacia meal. The addition of raspberry or vanilla flavoring, advocated by some workers, I have found has a tendency to nauseate a fasting patient and hence I do not include it among the ingredients.

Employing the above mentioned liquid meal, the normal duodenal cap is seen to be of conical or bee-hive shape, its basal or pyloric border straight and its lesser and greater curvature borders slightly convex and smooth in outline. It is the finding of a constant deformity of this bulbus duodeni which we shall stress in our later discussion. The second and third portions of the duodenum present only an ill-defined, feathery flecking of barium particles in the average case, with no workable outline of the walls of the intestine.

It is very essential that the gastro-intestinal tract under examination be free of food and fecal matter, hence the roentgenologist working in a hospital has a decided advantage over the office practitioner, whose control of his patient is more or less limited and who lacks the skilled assistance so necessary for the proper preliminary preparation of the subject for diagnosis. There is much discussion and wide divergence of opinion as to the necessity for catharsis. My instructions contain an order of castor oil or compound licorice powder to be taken the day before and a cleansing enema the morning of examination. The morning meal is of course omitted. This routine, if intelligently complied with, usually gives me a clear field for operations.

There is radical disagreement among roentgenologists as to the relative importance of screen and plate in the diagnosis of duodenal ulcer. Some, aligning themselves with the Continental School, place the fluoroscopic examination and indirect signs to the forefront, basing their findings on these, and considering the serial plates as of only secondary or confirmatory importance. While others, following Cole, George, and many of the American School, would consider the serial plates showing the defects of the cap as sufficient evidence and employ the fluoroscope only as a necessary, tho often misleading, adjuvant. A third group, the outstanding member of which is Carmen of the Mayo Clinic, would compromise with these two more radical viewpoints, and while assigning to the pictured deformity in serial



plates its justly preeminent station, nevertheless consider the indirect signs as of the utmost value in a proper and conclusive diagnosis of the pathology present. From my rather limited experience I should prefer to take my stand with this last group, since I find that I can ill afford to scorn any legitimate aid in this very difficult and oftentimes confusing field of diagnosis.

Having administered the barium by mouth, the examiner allows sufficient time for the full and vigorous peristaltic waves of the stomach to become the established order, and when this has occurred, the bulb of the normal duodenum should be outlined as a smooth walled cone, whose base is formed by the pylorus. According to Alvarez, "either simultaneously with, or shortly after, the arrival of a gastric peristaltic wave at the pyloric line, there is a strong tonus contraction in the duodenum. This observation may throw some light on the mode of development of the pain in duodenal ulcer, because we now have every reason to believe that hunger contractions in the stomach will produce similar contractions in the duodenum. It is also interesting to note that the peristaltic rushes which carry the food down the second portion of the small bowel almost always have their origin in tone changes in the duodenal cap."

Our main endeavor is to adequately visualize the duodenal bulb and this is attempted in the vertical position, first using the upright fluoroscope. If there seems to be an irregularity in the contour of the cap, pressure with the gloved hand is resorted to in order to force the contrast mixture to round out the first portion. But the most satisfactory view is often obtained with the patient in the horizontal position, rotated slightly to the right and lying face down on the table. Rotation in various directions seldom fails to bring the cap into view at some angle. Nevertheless, in very fleshy individuals or those with pronounced steer-horn stomachs with the duodenum occupying a posterior position, I have found great difficulty and, in some cases, have been wholly unable to demonstrate the cap under the fluoroscope. After observing the secondary functional signs which may be present, a series of plates is made in which I endeavor to show the contour of the bulb at short intervals. Any persistent deformity is usually first observed on the fluoroscopic screen and then confirmed on the plates.

A very conservative estimate places nine tenths of all duodenal ulcers in the first portion or cap region and the selective site would seem to be the lesser curvature border. The other tenth occur as single or multiple ulcerations of variable size and structure and may be situated anywhere in the second or third portion of the duodenum. These latter, however, are diagnosed more by inference and indirect signs, since the whole length of the duodenum becomes evident only when the barium mixture flows freely from a gaping pylorus or when there is an artificial or real organic obstruction at the duodenojejunal junction.

The most characteristic and dependable sign of duodenal ulcer is now conceded by the majority of roentgenologists to be deformity of the bulbus duodeni and the niche type is claimed to be the most frequent form of such irregularity, (66%-75%). Its formation is due to the filling out of the ulcer crater with the contrast mixture and, when demonstrated as a constant defect on the bulbar shadow, may be considered as diagnostic. Occurring as it usually does on the lesser curvature border of the cap, it is produced by the tightening or contraction of the thick bundles of longitudinal muscle fibres in this location, excited by inflammatory changes in the ulcer area. The circular coat is thus compressed and results in an elevation or puckering tissues surrounding the crater. This process throws the ulcer, as seen in the niche defect, into relief and we obtain a profile view. The niche is encountered in all forms of ulcer from the simple mucosal type to the indurated and calloused variety. Hence the amount of distortion of the bulb by this lesion may be out of all proportion to the findings at operation and so it is unsafe to predict the size of an ulcer from the Roentgen appearance.

Other marked deformities include a general distortion of the bulbar shadow, due either to cicatricial contractures or spasmodic manifestations, irregularities of the basal border, various species of incisurae, either unilateral or bilateral, occurring most frequently opposite the ulcer site on the greater curvature border.

In cases where the diagnosis is doubtful, we may rule out the purely functional and spasmodic deformities by the administration of 20-25 drops of tincture of belladonna three times a day to physiological effect. This will produce such relaxation that at the second examination either the spas-

tic defects will have entirely disappeared or so altered their former appearance as to demonstrate their nature. The point to be emphasized is that the size or shape of the defect is of minor importance as compared with its constancy and similarity in outline in serial plates.

It was at first advanced as the main objection to accepting the bulbar deformity as a major sign of duodenal ulcer that there were many extrinsic causes for the same appearance. While this fact cannot be denied and may lead to quite a few erroneous conclusions yet there are many factors which will aid a careful examiner to make these failures a minimum. Extensive adhesions about the cap from a cholecystitis or reflex spasm from an appendix chronically inflamed are perhaps the most frequent extraneous causes. Also the enlarged gall bladder may produce a broad, concave, smooth-walled defect in the upper portion of the bulb.

Of the indirect signs of duodenal ulcer, gastric hypertonus, hyperperistalsis, and hypermotility are the most commonly noted. These are encountered in other conditions, it is true, but they are so often an accompaniment of this lesion, that they are a distinct diagnostic aid. In the obstructive cases, due to marked cicatricial contraction, even despite the violent peristalsis, there remains a six-hour retention in the stomach. In the non-obstructive type, an abnormally rapid evacuation of the stomach contents is usually associated with the other members of the "hyper" group and at the six-hour examination we may find that the barium mixture has made the circuit of the colon. Tenderness on pressure over the duodenum is given a very unimportant position in the catalogue of signs of ulcer, as any inflammatory condition in the upper quadrant on the right may produce such a symptom. Tho we do not attempt to minimize the diagnostic importance of deformity of the bulbus duodeni, yet it does seem to us that the indirect, functional signs should not be cast aside as valueless, since many times they give pertinent data as to the intensity of the pathological process and are often an index to the necessity for operative procedures.

Have we statistics to prove the value of roentgenology in the diagnosis of duodenal ulcer? The answer may be found in the record of one of our foremost clinics, where a great volume of this work is carefully checked with operative findings. Carmen presents a series of 523 Roentgen diagno-

ses of duodenal ulcer with four hundred and ninety-nine of them confirmed by the surgeon. In the same period, out of 544 negative diagnoses, 512 were free of duodenal ulcer at operation. Prior to 1920, some 4,000 cases of duodenal ulcer had been proven as correct by operative procedure, all of them having been previously diagnosed by the roentgenologist.

Schinz at the Central Roentgen Institute of Zurich, Switzerland, has reported 66 carefully checked Roentgen diagnoses followed to operation and states that the number accurately localized as well was astonishingly large. His enthusiastic conclusion seems to be that no ulcer of any size should escape detection.

Foerster, on the other hand, reminds us of the fallibility of our most prized diagnostic procedures, by quoting in one of the European journals, a series of nine cases, giving by history, clinical and roentgenological observation all the classical signs of duodenal ulcer, not one of which at operation presented such a lesion. Adhesions of an extensive nature were responsible for the errors in diagnosis.

In conclusion, Carmen, in his most excellent volume on *The Roentgen Diagnosis of Diseases of the Alimentary Canal*, has very tersely and satisfactorily expressed the proper attitude of the conscientious roentgenologist toward an interpretation of his findings. He says, "Failure to discover a lesion by the Roentgen ray is often pardonable, but the subjection of a patient to needless operation on trivial Roentgen evidence alone is not readily forgiven by those concerned. To sum up, the essentials for satisfactory Roentgen diagnosis are faithfulness to an orderly routine, careful observation, the use of antispasmodics and re-examination in doubtful cases, cautious interpretation, and last, but not least, a willingness to admit, whenever it is true, that the findings are inconclusive."

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*Discussion:* H. Lee Farris, M.D., Tulsa.

Mr. Chairman and Gentlemen: I desire to congratulate Dr. Venable on his splendid paper, which shows very clearly he is master of the subject. It is so concise and superbly written as to completely cover this difficult subject. It seems to me that all points were so thoroughly dwelt upon as to leave practically no room for discussion. However, I heartily concur in all that he has said and will stress only three or four points. Like Dr. Venable, I am not an adherent to the screen alone, nor likewise to the serial plates. I am positive that too frequently Roentgenologists are too prone to rely upon one or another method of examination when we should always use every available means to clinch our diagnosis. The late Walter Mills of St. Louis, and Carmen, also, used to always screen first and sketch what they saw; then to verify if possible, by serial plates. Many, many times I have watched them and have been agreeably surprised to see how frequently they proved their findings; therefore, I heartily agree with Dr. Venable that we should never rely on any one method of procedure.

In conclusion, I desire to impress upon you the following thoughts; which are in substance those of Dr. Diamond of New York:

(a). Ulcer always produces morphological changes in the contour of the duodenum.

(b). That only very rarely does the duodenum appear normal in the presence of an ulcer—unless there is absence of a spasm.

(c). Roentgen Ray frequently discloses a niche which the surgeon cannot palpate and a negative surgical diagnosis is not justifiable unless the duodenum is opened and inspected; therefore, the X-ray diagnosis often supersedes surgical exploration.

(d). In interpreting duodenal deformities we must always try to differentiate exactly, if possible (that is) as to whether it be a scar, a niche or an infiltration.

(e). Always remember the pathological entities (adhesions, etc.), also their manners and behavior under the Ray.

## DALLAS WILL ENTERTAIN THE SOUTHERN MEDICAL ASSOCIATION IN NOVEMBER.

A warm invitation is being extended to the doctors of the South to attend the annual meeting this fall, and preparations are being made to entertain between four and five thousand. Already, 1500 rooms in the best hotels have been set aside for this purpose, and it is estimated that more will be available.

Dallas has all the chief requirements for a successful convention city; ample hotels and auditorium, easy accessibility, facilities for entertainment and diversions, coupled with whole-hearted hospitality on the part of the citizenship. It is not only a medical center of importance, but a city of interest and opportunity.

Ten trunk line steam railroads serve Dallas, with 100 passenger trains daily in and out of the \$6,500,000 Union Terminal Station. 258 interurban trains leave the \$1,000,000 electric interurban station daily. Dallas is 16 hours by rail from Kansas City, 18 hours from St. Louis, 27 hours from Chicago or Cincinnati, and 43 hours to New York.

For those who wish to use the automobile in attending the S. M. A. convention. Dallas is located on five transcontinental highways—Bankhead, Meridian, King of Trails, Dallas-Canadian-Denver, and the Dixie Overland. These highway organizations assure the tourist of well kept roads. In Dallas County alone 1000 miles of surfaced highways, and a tourist camp and center of highway information are available also.

Dallas has a number of strong clubs, splendidly housed, such as the Dallas Athletic Club, University Club, City Club, a number of fine golf clubs, and all the leading service organizations, such as Rotary, Lions, Kiwanis are represented here—all are most hospitable in the entertainment of visitors.

Restaurants, either connected with hotels or independent, are numerous and of a generally high standard. Some of the highest priced chefs in the nation are here. You can get meals with a Western flavor, Mexican dishes, Chinese dishes or old fashioned Southern cooking. All the year truck gardens and farms are producing in some parts of Texas, and this coupled with proximity to packing houses, poultry farms and orchards, tends to keep food prices reasonable.

Dallas has 37 theatres, with a combined seating capacity of 28,000. These include summer and winter stock companies, many good road shows during the season, high class vaudeville and motion picture houses, and the Little Theatre which was twice awarded the Belasco Prize. There are theatres costing as much as \$2,000,000 and seating as many as 3,000 persons.

Dallas' climate as a whole is pleasant and invigorating, without severe extremes, and November in Texas as a rule is crisp and clear, ideal for travel and for outdoor sports.

Through the medium of this Journal, in the later issues, date on the Hospital and Clinical facilities of the Convention City will be given, meanwhile, the medical profession of Dallas and of Texas, invites you to plan to attend the Southern Medical Association Convention this fall.

CURTIS ROSSER, M.D.,  
For the Publicity Committee.

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DR. CLAUDE A. THOMPSON.....Editor-in-Chief  
Barnes Building, Muskogee, Okla.

DR. P. P. NESBITT.....Associate Editor  
814 Surety Building, Muskogee, Okla.

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Failure to receive the Journal should call for immediate notification of the editor, Barnes Building, Muskogee, Oklahoma.

Local news of possible interest to the medical profession, notes on removals, changes in address, deaths and weddings will be gratefully received.

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### EDITORIAL

#### REDUCING PHYSICIANS' INCOME TAX.

In computing physicians' income taxes, the Commissioner of Internal Revenue, for several years has refused to deduct expenses incurred in traveling to attend meetings of medical organizations. This has been an attitude and position despite a statement in the law that "In computing net income there shall be allowed as deductions (1) All ordinary and necessary expenses paid or incurred during the tax-

able year in carrying on any trade or business, including . . . traveling expenses (including the entire amount expended for meals and lodging) while away from home in the pursuit of a trade or business." One Deputy State Commissioner has classified the expenses as "personal expenses".

When the Harrison Anti-Narcotic Act was enacted, physicians were required to pay an annual tax of \$1.00 for a license. The Act was passed through Congress at the time under the guise of a "Revenue" producing measure, though it is well known, and has been since declared by repeated decisions of the United States Supreme Court, that the end in view, while ostensibly revenue producing, was in reality corrective or preventive legislation, with moral and regulatory phases. The general opinion is that the law was passed by Congress in that guise to enable them to actually invade further than they already had, the strict rights and domains of the states, which otherwise could not be done. The fee of \$1.00 was attached merely to cover the cost of administration. Under the stress of war's demand, a further addition of two dollars annually was made, making the fee \$3.00, where it now stands today, one of the few unreduced and certainly unjust taxes. Unreduced simply because it has been too small a matter to haggle over by any individual, notwithstanding the violation of a principle of fair dealing, the physician already overburdened with all sorts of petty interferences pays and pays and pays. Expenses incident to improving one's ability to combat disease are as essential, as important and farreaching as the necessity to replace a broken thermometer, buy gas and oil for the car, pay office and telephone rent, hire collectors or engender any other well-known deductible expense. The Government is now and has been either entirely abolishing or greatly reducing all war time taxation measures, why not spread the matter equitably and give the physician the benefit as well as the plutocratic rich or the soda fountain habitue?

The matter of further reduction is in the hands of the Ways and Means Committee of Congress, Honorable William R. Green, Chairman. Every Oklahoma physician who believes in fair usages should ask his Congressman to at once call Mr. Green's attention to the matter and ask him to suggest that the unnecessary tax feature of the Harrison Law be eliminated and that a liberal provision be written into the In-



come Tax Law, providing for allowance of such expenses as above noted, which clearly fall into the class which should be eliminated. The Committee is now considering the matter, so our action should be taken at once. Write your Congressman, or better still ask him personally.

### THE WARNING RUMBLINGS OF SMALLPOX.

As we have previously noted, smallpox, like most of the contagious diseases seems to have cycles of mildness followed by outbreaks of severity of more or less gravity. This very habit of mildness scores heavily eventually upon unsuspecting, careless people and communities. For years the disease has been so mild in some localities that no one paid much attention to it. Now the pendulum seems to be swinging again to the danger point, in some centers it has already created unbelievable havoc until the actual reports are read. In the United States within the last few months many epidemics have occurred where the toll of life was unusually heavy, this despite the fact that men who have observed many epidemics and thousands of cases have not seen a death from the disease. The Kansas City and Denver epidemics alone are evidences of this peculiarity.

Compiled reports from all over the world show that it is now more prevalent than ever before, one or two countries of Continental Europe and Egypt are about the only exceptions to widely scattered epidemics. As is well known the treatment of the disease is not satisfactory, quarantine is more than worthless and useless on account of lending a feeling of false security, while preventive vaccination is the most satisfactory and sensible of all measures. Twenty-four cases with 9 deaths in one small town in New Jersey seems to warrant considerable attention to the matter. We may soon expect a reversion of type in Oklahoma.

#### *Editorial Notes—Personal and General*

DR. H. M. WHEELER, Helena, and Miss Ethel McCune announce their marriage on July 2, at Kansas City. Dr. and Mrs. Wheeler have been at home since July 15th.

DR. H. H. WILSON, Frederick, and the tourist party accompanying him are in San Francisco, and plan to visit a few more points of interest on the Coast before returning home.

DR. O. R. GREGG, Pawhuska, is taking a special course in urology at Kansas City.

DR. G. A. COMP, Manitou, who was seriously ill at his home, is reported as improving.

DR. W. A. HOWARD Chelsea, attended the O. R.C. camp at Fort Snelling, Minn., in July.

DR. E. B. THOMPSON, Duncan, returned recently from an extended trip through the Western states.

DR. J. C. ROSS, Woodward, has removed to Los Angeles, California, where he will establish his practice.

DR. JAMES D. OSBORN, JR., Frederick, has returned from Chicago, where he has been taking some special work.

DR. and Mrs G. E. STANBRO, have returned from the European trip with the Interstate Post Graduate Assembly.

DR. and MRS. T. F. GROSS, and sons, returned recently from a month's motor trip to points in the Southern states.

Dr. McLAIN ROGERS, Clinton, announces the association of Dr. Charles J. Alexander with the Clinton Hospital staff.

DR. LEONARD G. WASHINGTON, Tulsa, who was reported as having slashed his throat and wrists on a train en route to St. Louis, is still in a critical condition in the City Hospital, St. Louis. Dr. Washington is believed to be suffering from anemia.

DR. CHARLES THOMAS WHITE, Tonkawa, died July 20, 1925, of neuritis, after having suffered with disease for over two years. Dr. White was born in Illinois in 1856 and is a graduate of Rush Medical College in 1893, and Missouri Medical College in 1899. He practiced in Oklahoma for 35 years.

DR. A. L. STOCKS, Muskogee, as a member of the Committee on Public Policy and Instruction of Public, delivered an address to teachers taking the summer course at Northeastern Normal School, Tahlequah. There were some 1200 teachers present. The subject of the Doctor's lecture was "The Relationship of Scientific Medicine to the Community". The ideals and purposes of organized medicine were presented forcibly and entertainingly and were very well received.

#### BOOK REVIEWS

MODERN SURGERY, General and Operative, by J. Chalmers Da Costa, M.D., LL.D., F.A.C.S Samuel D. Gross Professor of Surgery, Jefferson Medical College, Philadelphia, Ninth Edition, Revised and Reset. Octavo of 1527 pages with 1200 illustrations, some in colors. Philadelphia and London: W. B. Saunders Company, 1925 cloth, \$10.00 net.

## BOARD OF MEDICAL EXAMINERS—STATE OF OKLAHOMA

The table below gives the names and other data concerning the Doctors who appeared before the Board at their meeting June 16 and 17, 1925, and were licensed under date of June 20, 1925:

Name	Address	College	Date of Grad.	License No.	How Licensed
Ira Ki Cummings	Ponca City, Okla.	Univ. of Texas.	1924	3424	Reciprocity Texas
Will Mack Majors	Lafe, Ark.	Memphis Hosp. Med.	1912	3425	Reciprocity Ark.
Chas. Robt. Silverthorne	Woodward, Okla.	Univ. of South. Sewanee	1899	3426	Reciprocity Kans.
Paul B. Nussbaum	St. Louis, Mo.	St. Louis U. Med. School	1924	3427	Reciprocity Mo.
William Wynne Hicks	Okmulgee, Okla.	Univ. of Virginia.	1920	3428	Reciprocity Miss.
Omar Autry Kirby	Marietta, Okla.	Univ. of Louisville	1920	3429	Reciprocity Texas
Chas. Jerome Alexander	St. Louis, Mo.	Washington Univ. Med.	1924	3430	Reciprocity Mo.
Wm. Dewey DeLay	Durant, Okla.	Vanderbilt Med.	1923	3431	Reciprocity Tenn.
Anon Warren Roberts	Allen, Okla.	Baylor Med. College	1924	3432	Reciprocity Texas
Herbert R. Goshorn	Maysville, Okla.	Univ. Med. Col., K. C.	1906	3433	Reciprocity Kans.
Tolar R. White	Kingman, Ariz.	Memphis Hosp. Med. Col.	1901	3434	Re-registration
Wm S Woodford	Douhat, Okla.	K. C. Med. Col.	1901	3435	Re-registration
Grady F. Mathews	Oklahoma City, Okla.	Oklahoma University	1925	3436	Examination
Arthur F. Hanson	Chickasha, Okla.	Oklahoma University	1925	3437	Examination
Wm. Bronnie Wild	Norman, Okla.	Oklahoma University	1925	3538	Examination
Emery E. Alling	Guthrie, Okla.	Oklahoma University	1925	3439	Examination
J. Wendell Mercer	Lambert, Okla.	Oklahoma University	1925	3540	Examination
Allen C. Kramer	Oklahoma City, Okla.	Oklahoma University	1925	3441	Examination
John H. Robinson	Oklahoma City, Okla.	Oklahoma University	1925	3442	Examination
Aaron S. Price	Oklahoma City, Okla.	Univ. of Louisville	1924	3443	Examination
Wm. O. Smith	Oklahoma City, Okla.	Oklahoma University	1925	3444	Examination
Byrum E. Brown	Davis, Okla.	Oklahoma University	1925	3445	Examination
Forrest Hale	Cherokee, Okla.	Oklahoma University	1925	3446	Examination
Van Dolph Herrington	Pryor, Okla.	Oklahoma University	1925	3447	Examination
Joseph Elmer Kanatser	Shawnee, Okla.	Northwestern Med.	1923	3448	Examination
Clarence R. Bernard	Nowata, Okla.	Oklahoma University	1925	3449	Examination
Byron R. Gayman	Britton, Okla.	Oklahoma University	1924	3450	Examination
Julius Ernest Levick	Van Couver, B. C.	University of Manitoba	1924	3451	Examination
Laile G. Neal	Oklahoma City, Okla.	Oklahoma University	1925	3452	Examination
Loren V. Baker	Sentinel, Okla.	Oklahoma University	1925	3453	Examination
Alvin Gorby	Oklahoma City, Okla.	Oklahoma University	1925	3454	Examination
Andrew F. Giesen	Oklahoma City, Okla.	Oklahoma University	1925	3455	Examination
Forrest A. Harrison	Ardmore, Okla.	Washington Univ	1924	3456	Examination
Donald W. Branham	Oklahoma City, Okla.	Oklahoma University	1925	3457	Examination
Emery E. Beechwood	Oklahoma City, Okla.	Creighton Med. Col.	1924	3458	Examination
Claude H. Mears	Oklahoma City, Okla.	Oklahoma University	1925	3459	Examination
Cleo F. Cailey	Oklahoma City, Okla.	Oklahoma University	1925	3460	Examination
Harry W. Steinig	Oklahoma City, Okla.	Oklahoma University	1925	3461	Examination
Robert L. Hamilton	Westville, Okla.	Oklahoma University	1925	3462	Examination
Jesse J. Hoover	Oklahoma City, Okla.	Oklahoma University	1925	3463	Examination
Lester P. Smith	Oklahoma City, Okla.	Oklahoma University	1925	3464	Examination
James S. Perry	Tulsa, Okla.	Oklahoma University	1925	3465	Examination
Chas. R. Rayburn	Norman, Okla.	Oklahoma University	1925	3466	Examination
Flora A. Wright	Oklahoma City, Okla.	Oklahoma University	1925	3467	Examination
Franklin Jelsma	Oklahoma City, Okla.	Oklahoma University	1925	3468	Examination
Robert C. Sullivan	Ardmore, Okla.	Vanderbilt Med.	1922	3469	Reciprocity Tenn.

DaCosta's surgery has so long been accepted as authoritative, the work covers such a wide range of subjects that any sort of review must necessarily reduce itself to generalities. For, if we consider the good things the work contains, pages would be written with much yet left of great value. Surgical bacteriology, asepsis and bandaging are excluded, with the advice from the author that they should be sought in special works now dealing with them, or in large text-books, having more space. All the more than fifteen hundred pages and illustrations are prolific and to the point. The sections devoted to bone tuberculosis are unusually instructive, while those devoted to the various forms of arthritis, acute and chronic, traumatic, infective, acute suppurative, typhoid, gonorrhoeal, pneumococcic, acute rheumatism, the chronic type, gouty, chronic osteoarthritis and osteochondritis are replete with suggestions as to appropriate treatment. In many of these the importance of early

radical measures is stressed as offering the best end results.

THE SURGICAL CLINICS OF NORTH AMERICA (Issued serially, one number every other month.) Volume V, Number III (Mayo Clinic Number—June, 1925.) 260 pages with 115 illustrations. Per clinic year (February 1925 to December 1925.) Paper, \$12.00; Cloth, \$16.00 net. Philadelphia and London: W. B. Saunders Company.

This issue is noteworthy as coming from one of the World's greatest clinical and operative centers, the Mayo Clinic. Among the articles which should be useful to the physician are: "Certain Difficulties Presented by Disease of the Biliary Tract", E. Starr Judd; "Lesions of the Stomach and Duodenum", Donald Balfour; "Surgical Treatment of Lesions of the Hip and Knee and Nonunion of the Radius", Melvin Henderson; "Surgical Treatment of Chronic Lesions of the Bone", Henry Meyerding; "Sacrococcygeal Cysts and Sinuses", James C. Masson; "Notes on Technical



Difficulties of Surgery of the Thyroid", John Pemberton; "Empyema", Harrington and Plankers; "Ureteral Stones", Bumpus and Scholl; "The Diagnosis and Treatment of the More Common Diseases of the Anus, Rectum, and Sigmoid". Louis A. Buie, and "Certain Diagnostic Problems in Otology", by Lillie and Anderson. The entire volume is splendidly illustrated, all originals.

THE SURGICAL CLINICS OF NORTH AMERICA (Issued serially, one number every other month.) Volume V, Number II (New York Number—April 1925.) 337 pages with 105 illustrations. Per clinic year (February 1925 to December 1925.) Paper, \$12.00; Cloth, \$16.00 net. Philadelphia and London: W. B. Saunders Company.

PHYSICAL DIAGNOSIS OF DISEASES OF THE CHEST. By Joseph H. Pratt, A.M., M.D., and George E. Bushnell, Ph.D., M.D. Octavo of 522 pages with 166 illustrations. Philadelphia and London: W. B. Saunders Company, 1925. Cloth, \$5.00 net.

### ORTHOPAEDIC SURGERY

Edited by Earl D. McBride, M. D.  
1006 First Nat'l Bank Bldg., Oklahoma City

#### CLINICAL CASE REPORT: Spastic flat foot due to Gonorrheal Arthritis.

E. J. F. admitted to St. Anthony Hospital June 26, 1923, age 20, white, clerk in shoe store.  
Chief Complaint: Painful feet.

History: In starting to obtain the history in this case the patient began to speak of his arches being broken and of what he thought was the cause. He had been told by his physician that his pain was due to broken arches. The history, however, revealed that one year previous to admission he had had an attack of acute gonorrhea and had cured himself in six days with a drug store remedy. Epididymitis followed. Pain in his ankles and feet came on gradually and he began to try various kinds of arch supports and shoes but everything that he tried made his feet much worse. He finally had to give up his position in a shoe store because it required so much standing. He was told that he had rheumatism and took some baths at the springs but it did not seem to relieve his feet. The feet have become gradually stiffened in the joints and at the present time he can only walk for a very short distance without resting. There has been no evidence of gonorrhea since the first eight weeks of the disease.

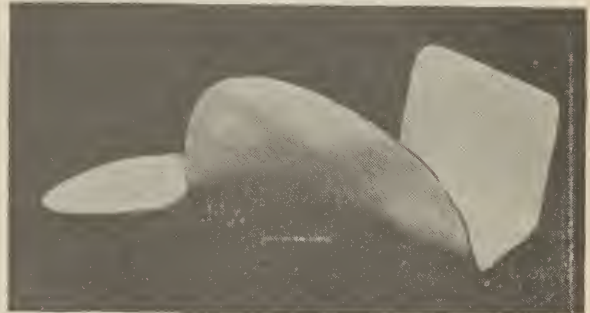
Examination: This well developed young man walks as if stepping on something he is afraid of breaking. He has very clumsy arch supports in his shoes, modified and padded with cotton and adhesive. The feet are of normal size and proportion and the joints are not swollen or enlarged but the skin has a slight bluish color and return of color after pressure is very sluggish. All the joints are stiffened to the extent that practically no motion can be obtained in any of the joints below the ankle.

The longitudinal arch is flattened with the inner border of the foot bulging and the toes on

both feet permanently dorsiflexed with the metatarsal arches convex instead of concave. G. U. reports, massage of prostate negative.

X-ray: There are spurs of bone on the plantar aspect of both heels and all of the points appear more or less atrophied and cloudy.

Operation: June 28, 1925. Ethylene anesthetic. Both feet were forcibly manipulated over a wedge so that all the joints had practically normal motion. Casts were applied from the toes to the knees with both feet forcibly inverted and toes flexed. On the fifth day after the operation, patient was able to stand and walk some in his casts. Three weeks after the operation the casts were removed and plaster impressions made for



SLIGHTLY MODIFIED WHITMAN BRACE MADE OF DURALUMINUM METAL, THE WEIGHT OF WHICH IS ONLY TWO OUNCES.

combination Whitman braces. The feet were then strapped with adhesive so as to maintain correction of the arches and a pad of felt about one-half inch thick placed back of the heads of the metatarsals and strapped on with adhesive. Daily manipulation of the feet was accomplished although the procedure was more or less painful. The Whitman Braces were applied to arches and proper shoes fitted, after which strapping was omitted but the manipulation was continued daily for two weeks. Patient was now given exercises such as walking on tiptoes and walking on the outer border of the feet. Also standing and flexing the toes on the floor twenty-five times. He was advised how to manipulate his own feet and keep the joints pliable.

Results: After two years the patient is now able to walk as far as he wishes, or stand for as long hours as is necessary. He still wears the braces, however, and states that at times flighty pains pass through his feet.

Discussion: It is no use attempting to put a rigid brace or arch support upon a foot of this kind until after manipulation under an anesthetic. In the earlier steps physiotherapy and massage together with strapping and padding of the feet may prevent adhesion and distortion of the arches. The focus of infection should be removed as quickly and as completely as possible. Manipulation under ether will fail unless focus is removed. The important feature of the operation is to completely free all adhesions. If the manipulation is not done in a severe forceful manner results will be very unsatisfactory. Fit of the brace is also a very important feature. It should be adjusted until there is no pressure from the edges and the position should permit correction of the foot without undue pressure. After care

of the feet by the patient is also very important. He should persevere in manipulating all of his joints each day and in the active exercises.

## II. Fracture of the Spine.—Emil S. Geist, Minnesota Medicine, January, 1925.

The paper does not consider isolated fractures of the transverse processes, laminae, or spinous processes, nor pathological fractures.

Seventy-four cases are reported. Nearly all occurred in the active period of life (twenty to thirty-five years of age) and in males. One-third had paralysis, in most cases total, below the involved spinal segment; in a few, a partial paralysis of an extremity. With paralysis present the diagnosis is easy, but in those without paralysis it was missed in about twenty-five per cent of the diagnoses subsequently made by careful X-ray examination. The X-ray examination should include lateral and stereoscopic anteroposterior views. Fracture of the spine by no means always presents unmistakable signs and symptoms, occasionally giving no symptoms whatever, at a late date. The causative trauma need not be of extreme severity. Disability was greatest in the dorso-lumbar spine and ranged from 40 to 100 per cent. Forty-five per cent showed deformity, usually kyphosis. The complaints of the patients, in order of frequency, were: rigidity of the back, inability to lift heavy objects, weak back, pain, and paralysis. Of twenty-two cases seen within the first forty-eight hours, twelve were operated upon (laminectomy). Four of these were benefitted by operation, two died on the table, two shortly afterward, and four were not benefitted. The author feels that laminectomy offers no brilliant hope of relief of paralysis, but that without this operation the outlook is still more gloomy. There were thirty-eight "old" cases in the series, twenty-five per cent having been diagnosed as "back-strains". They complained of pain, rigidity, and inability to lift. Most of them were relieved by the application of braces. One had a spinal fusion, with complete relief.

For fresh cases, without paralysis, the author advocates rest in recumbency, best on a Bradford frame, for ten or twelve weeks, followed by a cast and later a brace. In late cases, in good operative risks, he advocates a fusion operation: where operation is impracticable, fixation by bracing.

## III. Fractures of the Hip.—Melvin S. Henderson—Minnesota Medicine, December, 1924.

Only intra-capsular fractures are considered. In these the fractured surfaces are bathed in synovial fluid, and this the author considers to be the factor inhibiting callus formation. Moreover, the proximal fragment has no muscular or ligamentous attachments and very small blood supply, its nutrition being correspondingly scant. Frail, elderly people may sustain fracture by indirect violence, the fall following the fracture.

Impaction may make walking possible after fracture, and fracture should be excluded only after careful radiographic examination. An important sign is the inability (except in firmly impacted fractures) to lift the heel from bed or table with knee extended. The classical clinical sign of fracture may be absent if the fragments are well impacted. It is unsafe to trust to impaction to produce union. Some impacted fractures do unite, but many eventuate in non-union and absorption of the neck. The author

considers the abduction method of Whitman the method of choice, the best means of securing anatomic restoration and fixation. The old belief that most fractures of the hip fail to unite must be revised. Only in patients with very little resistance, who cannot stand confinement, need this be true. Impaction should be broken up, the leg pulled down to normal length, and the hip swung out to full abduction, with foot in inversion. In this position the iliofemoral ligament is tightened and steadies the fragments. The position is maintained by a double plaster spica, or by traction in adduction, or by a Thomas splint. The Ruth-Maxwell traction method, if properly used, gives good results.

Reports of follow-up after the use of the Whitman method shows a good proportion of bony union and a very high percentage of good functional results.

## TUBERCULOSIS

Edited by L. J. Moorman, M.D.  
912 Medical Arts Bldg., Oklahoma City

### Observations on Partial Artificial Pneumothorax in Early Pulmonary Tuberculosis.—M. J. Fine, The American Review of Tuberculosis, January 1925.

The author feels that partial artificial pneumothorax is very useful in early pulmonary tuberculosis and urges its use in all early cases which are either not doing well under routine management or which develop clinical symptoms and physical signs on slight exertion.

The complications incident to artificial pneumothorax are lessened and the length of treatment necessary to obtain improvement greatly shortened when the treatment is used early in the disease.

### Studies of the Respiratory Organs in Health and Disease. 20. The Value of the Vital-Capacity Test in Artificial Pneumothorax.—J. A. Myers and William Bailey. The American Review of Tuberculosis, January, 1925.

Artificial pneumothorax has a definite effect upon the vital capacity of the lungs; the extent of the collapse and the condition of the uncollapsed lung tissue help to determine this effect. Since there is a large margin of safety in the lungs, all factors of respiration mechanical and chemical are practically normal in persons with a collapsed lung and there is no dyspnea except after exertion demanding more than a threefold increase in the normal ventilation.

Readings vary greatly on pneumothorax cases, the vital capacity being reduced from 32% to 77% of the individual's theoretical normal in this series of cases. Extra-pleural thoracoplasty, of course, greatly reduces the vital capacity permanently.

Vital capacity readings are of great value both in controlling fillings and in determining the condition of the better lung. Much dyspnea and discomfort may be avoided in patients with a low vital capacity before treatment by introducing small amounts of air every twenty-four hours until compensation has taken place, subsequent fillings reducing the vital capacity very slightly. After the lung is well collapsed the vital capacity



should remain approximately stationary after refilling if the opposite lung is holding its own. A gradual reduction in vital capacity should make the operator suspicious of the contralateral lung.

**Contralateral Exudative Pleuritis Complicating Artificial Pneumothorax.**—Andrew Peters, The American Review of Tuberculosis, Jan., 1925.

Very few cases of contralateral exudative pleuritis are reported in medical literature, and most of these have been noted since 1920. Three cases are reported here which came under observation at Loomis among the 229 patients who have received artificial pneumothorax there. While the immediate effects of this complication are very alarming, it is frequently not so serious as might be thought, two of the three cases reported here having made recoveries. It indicates a new localization of the tuberculosis process, however, which if progressive, is, of course, unfavorable. Thus although the course of the contralateral pleurisy itself is often favorable, it aggravates the patient's condition and makes for a much less favorable prognosis. Treatment depends upon the development in the contralateral lung; the exudate must usually be aspirated, while the artificial pneumothorax is disturbed as little as possible.

**Air Embolism and Artificial Pneumothorax.** H. A. Bishop, The American Review of Tuberculosis, January, 1925.

Statistics on the incidence of air embolism following artificial pneumothorax vary from 1 in 1000 to 1 in 1500 with a mortality rate of 30 to 50 per cent. Being dependent upon the alertness and diagnostic skill of the individual operator, these figures may be misleading and a special watchfulness for the signs of minor embolic process may cause a revision of these statistics.

The symptoms in the case presented here were characteristic of cerebral air embolism, following the withdrawal of the needle and arose when a slightly positive pressure was produced after a number of fillings. The pneumothorax was never satisfactory only a small pocket of air being produced and fillings always being difficult because of adhesions. Artificial pneumothorax is especially dangerous and difficult with this type of case, manometer readings are unsatisfactory and the danger of introducing the needle into the lung or transfixing a vessel in the highly vascularized pleura is great. Autopsy revealed the presence of air in the cerebral vessels in this case. This air, the only pathological evidence of cause of death, may have been aspirated into the vessels at autopsy in spite of the precautions taken to prevent it.

The direct cause of embolus is the entrance of air into a pulmonary or bronchial vessel. This air may enter the vessel through a rupture in its walls into an alveolus, may pass directly from the needle into a pulmonary vein, or may pass into a pleural vessel after the withdrawal of the needle, fibrosis preventing the transfixed vessel from contracting. Pleural adhesions are the indirect cause of this accident. Cases with extensive pleural adhesions must be approached carefully after thorough physical and X-ray study and every precaution must be taken during each filling. Air must not be introduced until a negative manometer reading with

definite oscillations is obtained, the location of the needle must be definitely known and the operation must be stopped on the slightest sign of trouble. Each case must be carefully checked with the X-ray at frequent intervals.

The treatment for this accident is symptomatic and is not successful in well marked cases.

**BACTERIOLOGY and PATHOLOGY**

Edited by Wm. H. Bailey, A.B. M.D.  
Wesley Hospital, Oklahoma City

**FURTHER OBSERVATIONS ON THE SURVIVAL OF BONE AFTER REMOVAL FROM THE BODY.**—S. L. Haas, M.D., San Francisco, Calif. Archives of Surgery—Vol. 10, No. 1, Part 1, Jan. 1925.

The author repeats the already known fact that molecular death of the body does not ensue immediately upon the somatic death of an individual. Some tissues remain viable longer than others. The period of survival is also dependent upon other factors and it is possible by certain methods of treatment of tissues removed to prolong its viability.

In discussing this question in its relation to bone tissue the author adopts the criterion of the formation of callus by the osteogenetic cells as proof of the life of the bone. In his experiments the bone was fractured, removed from the animal, subjected to different treatments especially freezing temperatures for varying periods of time and then the two fragments placed in normal anatomical relation to each other and buried in the muscles of the back of the same dog from which they had been removed. After about five weeks the bones were removed and examined microscopically.

Dr. Haas makes the following conclusions:

"Utilizing as a criterion the fact that there was a physiologic reparative response of healing of a fractured bone buried in muscle, the following conclusions are presented as a result of this experimental work.

"1. There were definite signs of proliferation in fractured bones that were kept at a freezing temperature for as long as five days. The shorter the exposure period, the greater was the reparative response.

"2. Control bones that were fractured and kept at room temperature showed no signs of proliferation on exposure for two days or longer.

"3. Bone after removal from the body does not die immediately, but retains its vitality for various periods depending on the environment. The degenerative process can be retarded, but not completely suppressed, by exposing the bone to a freezing temperature.

"4. In order to insure the preservation of the maximum life properties of bone after removal from the body, it is advisable to keep it at a freezing temperature. It is also essential, that such bone be used at an early time, as the vitality of the osteogenetic cells become less as the time increases and is absent after five days."

The question was raised in the discussion as to whether or not the osteogenesis did not come entirely from the new blood vessels pushing into the bone tissue from the outsider rather than from the bone graft itself.

**THE SIGNIFICANCE OF UROBILIGEN IN THE URINE AS A TEST FOR LIVER FUNCTION.**—George B. Wallace, M.D., and Joseph S. Diamond, M.D., New York Archives of Internal Medicine, June, 1925, No. 6.

The test is dependent on Erlich's aldehyde reaction and consists of a series of dilutions of the urine carried to the point where no further reaction takes place. The end result is read off where the faintest pink is still discernible. Technique of the test—add 1 cc of urine to 20, 30, 40, 50 cc of water or more. 10 cc of each dilution is placed in a test tube and to each is added 1 cc of Erlich's reagent. Read in 5 minutes, the end result is where the slightest pink color is still discernible.

Animal experiments indicate: (1) that, in parenchymatous changes of the liver, there occurs a marked increase in the urinary urobilinogen; (2) that, urobilinogen is formed normally in the intestinal canal by a process of decomposition of the bile pigment. Only in rare instances of intra hepatic infection, as in cholangitis, may the urobilinogen be formed within the biliary radicles.

The clinical significance of urobilinogen: (1) Disease of the liver and biliary tract. (a) In catarrhal jaundice, there is an excessive amount of urobilinogen formed, more at the beginning of the disease than toward the end. (b) In obstructive jaundice the urobilinogen never appears in the urine. (c) Septic Cholangitis causes an excessive amount of urobilinogen to be excreted. (d) In chronic liver affection, one does not find urobilinogen as a constant factor. (e) In cholecystitis and cholelithiasis, there is no alteration in liver function in the majority of cases. (2) Hemolytic disease: (a) In pernicious anemia, the presence of urobilinogen differentiates the primary from the secondary form, there is a greater increase in the primary form. (b) the increase of urobilinogen in malaria is a constant factor. This forms an important factor in the differential diagnosis between malaria and other infectious diseases.

**THE SUGAR CONTENT OF THE CEREBROSPINAL FLUID AND ITS RELATION TO THE BLOOD SUGAR.**—George M. Goodwin, M.D., and Harold J. Shelley, M.D., New York, Archives of Internal Medicine, Feb, 15, 1925, No. 2.

The sugar content of the cerebrospinal fluid is not constant in the same individual.

There is no level of sugar content of the cerebrospinal fluid which, within reasonable limits, might be considered normal. In the ordinary cases the figures varied from 40-77 mg. per hundred cubic centimeters of cerebrospinal fluid. In disturbances of the central nervous system the sugar content varied from 47-105 mg. per hundred cubic centimeters.

There is a definite relation between the cerebrospinal sugar and blood sugar. The percental relationship between the two, is relatively constant, lying between 45 and 65 per cent.

The ingestion of carbohydrates in sufficient quantities causes a definite and constant rise in the sugar content of the cerebrospinal fluid and disturbs the usual relationship between the sugar content of the cerebrospinal fluid and that of the blood.

Meningitis, whether tuberculous, staphylococcus or meningococcus frequently gives a low sugar content of the cerebrospinal fluid both as to actual milligrams per hundred cubic centimeters and in relation to blood.

The literature shows a high sugar content of the cerebrospinal fluid in relation to the sugar content of the blood in cases of encephalitis.

Untreated cases of early cerebrospinal syphilis give a low actual and relative sugar content of the cerebrospinal fluid. Under treatment this figure returns to normal.

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The administrative office of The Abbott Laboratories, located for many years in Ravenswood, will be moved about October 1st of this year to the new plant. The postoffice address will be Waukegan Ills., 25 miles north of Chicago, on the C. & N. W. R. R. About 24 acres of ground are owned by the Abbott Company to provide for the future expansion of their business.

## "RHEUMATISM" PAINS TRACED TO FLAT FEET

Many persons think they have rheumatism of the legs or back when they have flat feet or broken arches, according to Dr. Solomon Strouse in the May *Hygeia*.

A young man fell as he was escorting his lady down the aisle of a theatre. Much embarrassed and fearing himself the victim of serious rheumatism, he stayed in bed nursing his illness. When he finally called a physician, his flat feet were discovered and his illness disappeared in a pair of properly adjusted shoes.



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# THE JOURNAL

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## SURGICAL TREATMENT OF PUERPURAL ECLAMPSIA\*

E. B. DUNLAP, M.D.  
LAWTON

With the wonderful advancement in preventive medicine; with the increased efficiency on the part of the medical profession in general; and with the enlightened cooperation on the part of the laity, we do not encounter puerpural eclampsia so frequently.

However, in spite of the influences of all the above agencies to prevent this condition, we still have it to contend with. And to our mind no condition arises in a physician's experience, which so completely disorganizes and taxes his ability to cope, creditably, with it, as does puerpural eclampsia. The situation is tense, a time for action, a time when delay may mean disaster to both mother and child, to say nothing of the effect on the bewildered, anxious, and expectant relatives.

We will not attempt in this short paper, to go into the pathology of the condition, nor would we waste time by enumerating the symptoms and points of diagnosis, neither do we wish to discuss the various methods of handling, from a medical and obstetrical standpoint these cases.

But rather, we wish, in a brief way, to mention some pertinent facts that are almost constantly observed, and these facts are to form the basis for the class of cases in which the type of treatment, advocated in this paper, is indicated. And as evidence of the success of this method of coping with this type of puerpural eclampsia cases we wish to cite six cases during the past five years.

1st. The majority of the cases of puerpural eclampsia, we would say four or five to one are primipara.

2nd. The condition of puerpural eclampsia usually develops at or about expectancy—the convulsive seizure coming on co-incidentally with the first contraction of the uterus.

3rd. The patient as a rule is in good general condition—although overwhelmed by toxemia, which we know to be temporary in its effects, provided the underlying cause is removed.

4th. We have a viable fetus in utero.

5th. Hasty removal of the source of toxemia is the prominent element to be considered and the only avenue of safety for both mother and child.

6th. The persistence of a rigid undilated cervix—evidence of no tendency to natural delivery on part of the mother.

7th. Absence of normal contractions.

We feel that we are agreed that in a given case with the above mentioned conditions prevailing, there is but one thing to do, and that is to deliver as quickly as possible.

And we must further agree that the method that will accomplish the end quickest and safest to both mother and child is the one preference and should be adopted. Until the last five years the writer adopted and carried into effect as best he could the time honored method of accouchment force, varying the technique according to the indications at hand—constantly in suspense as to what would happen to the lacerated and exhausted mother and whether the contused and toxic-laden child would survive the ordeal.

But we have changed our methods and have been encouraged, by the uniform good results, to continue to submit this class of cases of puerpural eclampsia to relief by caesarian section. A review of six cases handled in this manner since August, 1920, will complete what we have to say on the subject.

Case 1.

On August 14, 1920, in consultation, we found a colored girl, age 16, in a continuous type of eclamptic convulsions. No period of consciousness intervened between

\* Read before the Section on Surgery and Gynecology, Annual Meeting, Oklahoma State Medical Association, Tulsa, May 12, 13, 14, 1925.

the convulsions. She was a primipara, at term. Convulsions beginning with the first contractions of uterus, cervix rigid, and undilated—very little tendency for presenting parts to become engaged, pains had ceased, blood pressure systolic 180—pulse 140—temperature not taken. She was taken to a hospital and delivered of twins by caesarian section. Eliminative treatment was instituted and the mother and twins left the hospital on August 21st, in good condition.

#### Case 2.

On February 17, 1922, Mrs. G. H., age 29, primipara, who lived 25 miles from Lawton, began to labor at about 2 A. M. The family physician was called and upon his arrival at 4 A. M. he found that she had been in convulsions soon after pains began. His examination revealed that no progress had been made in labor—after a few hours endeavor to control convulsions and still no progress toward delivery, he then insisted that the patient be brought to the hospital. She arrived at ten A. M. in an unconscious condition having convulsions every few minutes. She was delivered at 11 A. M. by section of a nine pound boy, who died four hours later, after several convulsions. The history of the case showed that the patient had had a severe cold for several days previous to her labor. These symptoms were aggravated after the operation, but despite this she made an uneventful recovery. We believe had she been delivered a few hours earlier the child would have been able to have overcome the toxic effects.

#### Case 3.

Mrs. R. N., age 20, primipara, living 20 miles east of Lawton, on March 26, 1923, began labor, which was soon followed by violent convulsions. Her physician hurriedly brought her to the hospital, where examination revealed a rigid cervix, no pains, patient unconscious B. P. 190, P. 120. As soon as possible she was delivered by section—a fine boy. Both mother and baby got along fine and left hospital April 15th.

#### Case 4.

Mrs. E. R., primipara, age 23, living southeast of Lawton 22 miles, began labor June 3rd. Convulsions developed soon after first pains—she was rushed to the hospital. On examination there was only slight dilatation of the cervix—it was rigid. B. P. 170, P. 130—having convulsions every 3 to 5 minutes. She was delivered

by section as soon as possible—a fine girl. Following delivery, which was at 1 P. M., she began having convulsions, the first at 3:25 P. M., and every hour thereafter for five convulsions—after this she made uneventful recovery, both she and baby leaving hospital June 27th.

#### Case 5.

Mrs. D. K., primipara, age 22, on October 28, 1923, began labor, which was soon followed by convulsions. She was brought to hospital and delivered by section. Baby and mother leaving hospital in good condition 10 days later, November 7th.

#### Case 6.

Mrs. F. W., age 19, primipara, at term. Began labor at 10 A. M., December 29, 1924. At eleven o'clock her physician saw her, made examination, found no dilatation. Albumen had been present in urine for one week previous. Her physician was called again at noon, and upon his arrival found patient in convulsions. He immediately sent her to hospital when convulsions continued with no consciousness intervening—pains ceased and no further progress in labor—temperature 100—pulse 120—B. P. 150. She was delivered at 2 P. M. by section. She and her normal baby boy left hospital January 8th.

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*Discussion:* Dr. John I. Kuhn, Oklahoma City.

Cæsarean section as treatment in puerperal eclampsia is a last resort measure and in modern surgical and obstetric practice is properly relegated to the limbo of the past. It is dangerous teaching to extoll its virtues without due consideration of all other measures which should properly precede, and less dangerous measures which should supplant Cæsarean section.

Even were we to consider only the surgical aspect of these neglected patients we dare not close our eyes to the poor surgical risks we have thrust into our hands. We *must* speak of the pathology and etiology of the toxæmias of pregnancy before we can consider operation, since it is of paramount importance to know as much as possible of these in order that we may select the measure of intervention best calculated to save the two lives in our care.

What of the liver with its tissue changes, areas of necrosis and fatty degeneration, its bacteriacidal and detoxicating function practically nil, and its glycogen storing



capacity reduced to a minimum? What of the spleen, overburdened to its limit? What of the pancreas? the kidneys? the heart? Certainly no poorer surgical risk can be imagined. Then, why not teach our clientele professional and lay alike, that there is a safe way and that it is their duty to follow that safer, saner, and simpler pathway to a happier termination?

Cæsarean section is indicated when there is some deformity or obstruction to the birth canal. But this, like the pre-eclamptic state, should be known long before the expected labor. Someone has blundered when these conditions are discovered late, and these errors must be foreseen and knowledge must be broadcast so that the public as well as the profession will be more enlightened. In our quasi-public capacity it is our duty to know how to teach the lay people depending on us for enlightenment, the proper pre-natal care. And, it is our duty to be properly informed ourselves so that no misinformation can gain foothold.

I can agree with the essayist insofar as his cases made necessary the rejection of all other measures. But it is dangerous advocacy of a very dangerous measure, the course is laid in an uncharted and dangerous sea, and it should not be given publicity. It would be more in line with real surgery to use his few cases as "horrible examples" of a class of neglected patients we have thrust upon us by an unenlightened lay and professional clientele.

The doctor has, so far, had a wonderfully unusual success, but I must insist that he is treading treacherous territory, and he should beware of its pitfalls, and he should take council with his friends before he is led too far astray.

#### A BRIEF CONSIDERATION OF DIPHTHERIA WITH ESPECIAL ADVANTAGES OF INTRAVENOUS ADMINISTRATION OF ANTITOXIN.\*

JOHN A. HAYNIE, B. SC., M.D.  
DURANT

It is my pleasure to present a short paper on the subject of diphtheria with reference, especially to the value of using antitoxin intravenously. I am not presumptuous enough to claim anything original in

this paper, however, I am indebted to some of my professional friends for helpful suggestions in its preparation, yet I alone am responsible for what is justly open to adverse criticism.

#### DEFINITION.

Diphtheria is a disease mostly of childhood and may be defined as an "Acute, febrile, contagious infection, caused by a specific bacillus, characterized by the presence of a false, fibrous membrane, deposited on the focus of infection, and accompanied by specific toxic, systemic manifestations, affecting principally the heart and nervous system." The most common location for the membrane to be found is on the tonsils, uvula, palate, nostrils, pharynx and larynx, but it may be present in other locations. Diphtheria is a communicable disease and does not arise *de novo*, but every case must come from a pre-existing one.

Geographically speaking, diphtheria is widespread over the world. It is a disease decidedly of childhood, though adults are sometimes affected. It attacks alike both sexes, rich and poor being susceptible to the infection, except, of course, those living in bad environments and those who are undernourished are more susceptible than those not so fortunately situated. The greatest morbidity falls between the ages of two and twelve years, and, of this period, the greatest number is observed between the ages of two and six years. Eighty-five per cent of all children over two and under the age of six years are said to be susceptible to diphtheria.

#### ETIOLOGY

Excluding epidemics, the greatest incidence of this disease follows sudden changes of temperature from warm to damp and cold. Temperature changes are prone to cause catarrhal disturbances in the upper respiratory tract, hence these areas become prolific fields for the inception of this disease. It is well known also that children who have adenoids, diseased tonsils, and other pathological conditions of the upper respiratory tract are more susceptible than those not so affected.

The definite etiological factor, however, is the Klebs-Loeffler bacillus which was discovered by Klebs in the year 1883 and produced in pure culture by Loeffler in 1884. These organisms produce a soluble toxin the absorption of which causes the disease. It should be remembered that in malignant cases, not only are the toxins

\* Read before the Section on General Medicine, Neurology, Pathology and Bacteriology, Annual Meeting, Oklahoma State Medical Association, Tulsa, May 12, 13, 14, 1925.

absorbed, but the organisms themselves are found in various parts of the body, the liver, heart, kidneys, spleen, and perhaps other organs.

### HISTORY.

The history of this disease dates from the earliest times, in fact it originated so far in the past ages that its beginnings are lost in the haze and mist of antiquity. It is spoken of by Areteus and Galen in their writings during the second century; Rome suffered a great epidemic of it during the fourth century, while Europe was swept by it in epidemic form during the Middle Ages, and its ravages caused consternation among the early New England settlers.

### SYMPTOMS.

The clinical picture of diphtheria offers a wide variation of symptoms, depending largely on the virulency of the infection and the parts involved. There is usually malaise, apathy, indifference to play, fever, loss of appetite, pain in the region of the throat, and enlarged cervical glands. Often the initial symptoms are not characteristic, more so, if the disease is very mild. There is usually some discharge from the nose like the beginning of an acute coryza or bad cold. On inspection, if the disease is seen early, the soft palate, uvula, tonsils, and fauces usually appear red and inflamed, often presenting points or specks of exudate on the surface. Later the exudate increases until a definite membrane results which is of a dirty whitish or pearly gray or ashen color, and which on removing leaves a bleeding surface. When the nose is involved, there is a foul nasal discharge, there may be chilly sensations, headache and vomiting with pallor and an anxious expression of the face. Sometimes the invasive symptoms are slow and insidious, in other instances, the onset may be abrupt and stormy, the patient taking with convulsions. The temperature may be high, low, or moderate. The severity of the attack can not be determined by the fever curve, nor can the prognosis be even approximated by this symptom, in fact, the fever is a poor criterion by which to judge the severity or the outcome of this disease. The toxemia may not be so great in the laryngeal type of diphtheria, but the alarming symptoms may be those of obstruction or asphyxiation, the physician often being called to see what the family thinks is croup.

### DIAGNOSIS.

It is very essential that the diagnosis be established early, for there is no disease within the whole domain of medicine wherein an early recognition means so much. In fact, diphtheria stands alone in this respect. To treat a disease and diagnose it later seems illogical and absurd, and is so, except in diphtheria. If there is sore throat that causes the slightest apprehension, it is best to take the safe course and administer antitoxin without waiting further. We can not afford to sit supinely by waiting for more clinical symptoms to develop or for a laboratory report when delay is fraught with so much danger and when we have at hand so potent a remedy and one wholly without harm whatever. The physician should use his common sense, fortified with acquired knowledge attained through study and experience. "Science and common sense in any field of human endeavor are not in conflict and normally should travel in consonance and not along divergent lines," and usually do.

I am sure that your experience has been the same as mine. We are often called to see this class of patients when there is a good deal of confusion in arriving at a diagnosis and we have to depend on clinical symptoms alone, and while a laboratory report is desirable and should always be had when possible, it is poor judgment and unfortunate both for patient and physician to wait for a laboratory report before giving antitoxin, unless an accurate one can be obtained at once. In waiting to receive the report the delay may allow a mild case to develop into a severe one which then might cause death of the patient or a life-long sequela.

### ANAPHYLAXIS.

Anaphylaxis or serum sickness may develop some from giving antitoxin on suspicious symptoms and while the reaction is rare, it nevertheless does occur sometimes and should be taken into consideration when giving antitoxin to individuals who have what is known as "horse asthma." Having a patient of this kind to whom it is desired to give antitoxin, it is best to test out the susceptibility by scarifying the skin and apply some of the serum. If there is susceptibility, an urticarial wheal or rash will appear within five to fifteen minutes.

### COMPLICATIONS AND SEQUELAE

The complications and sequelae are few but serious. There may be paralysis of the



palatal, ocular, laryngeal, and respiratory muscles, and those of the extremities may also be involved. The absorption of diphtheric toxins is prone to cause muscular paralysis. Paralysis sometimes follows mild cases and may be the first indication to the physician that he is dealing with a case of diphtheria. The kidneys, ears, and eyes may be involved, and bronchitis and bronchial pneumonia may occur as complications especially in laryngeal diphtheria. One of the most serious complications, however, is the involvement of the heart, which is more likely to be involved if there is muscular paralysis. The heart symptoms are usually observed during the first week of the disease and may be sudden or progressive. Sudden death may occur when convalescence seems well established. Rest is essential in protecting the heart, and digitalis, strychnine, caffeine, or strophanthus should be used to support it on the first sign of weakening or even before. Personally, I like to give a standard preparation of digitalis in small doses all along during the course of the disease to keep the heart well fortified. It should always be looked after even in the milder forms of this affection.

#### TREATMENT.

In the management of diphtheria rest in bed in a quiet and well ventilated airy room day and night is an absolute essential. The temperature of the room should be kept at about sixty-five or seventy degrees, and if possible, a room should be arranged that has plenty of sunlight. But few attendants should be allowed for obvious reasons and only those who are congenial to the patient. The diet should be light and easily digestible, consisting of such foods as milk, beef teas, soups, fresh fruit juices, and soft boiled or poached eggs. As the disease progresses favorably the diet may be added to cautiously, and only those articles given that are not likely to cause vomiting. Vomiting places an extra strain on the heart which may cause collapse and death. Strong purgatives should be studiously avoided, not only because they are useless within themselves, but for the reason they might cause straining and vomiting at bowel evacuations and produce collapse by the extra work placed on the heart. The bowels, however, should be looked after and evacuations had at proper times, this can be easily attained by giving some mild laxative, as senna, cascara sagrada, or milk of magnesia. The kidneys should also be looked after and

water freely given and urinalyses made at frequent intervals to ascertain the condition of these organs.

The public at large should be warned and educated to the dangers of sore throats in children and parents should be instructed to call or consult their family physician when their children complain of sore throats or have croup. When parents are brought to a realization of the vast importance of the necessity of this, a great advantage will have been made in saving much worry, great suffering, and many deaths.

Diphtheria while highly contagious is not as contagious as measles and scarlet fever. There is a belief shared by some physicians that one attack confers immunity to future attacks as some other acute diseases do. This conclusion is erroneous. While in some instances a degree of immunity may result, it is far from positive or absolute, and if it does occur, it is often of short duration. There are cases wherein a second infection has been observed within two months after the first.

It is highly essential that well children should not come in contact with children sick of this disease. Where a laboratory is at hand, it is a good routine to culture throats of all contacts, or isolate them, or give the Schick test, and to all those showing the presence of the germs or a susceptibility to the infection they should be given antitoxin or toxin-anti-toxin. It is well to remember that the incubation period is short, usually from two to six days, rarely ever over ten days.

The greatest cause of death in diphtheria is the delay in giving antitoxin, and this is often due to the lateness of the physician being called. If a sufficiently large dose is administered on the first or second day of the attack but very few deaths will result. Large doses are always indicated. If given subcutaneously or intramuscularly, rarely less than ten thousand units and up to twenty or thirty thousand units should be given, depending on the parts involved, the degree of toxemia, and the time having elapsed since the beginning of the disease. (*An excess of antitoxin in the system does no harm, but the lack of it may prove disastrous*).

It has been a routine practice of mine for the past two years to give antitoxin intravenously to all my cases, whether mild or severe, and even immunize by this method when using antitoxin for immunizing

purposes. It is through the medium of the blood that medicine is carried to every organ, tissue, and cell of the body, and antitoxin, before it can exert its effect, must get into the blood stream where it binds and neutralizes the toxins and prevents them from passing out into the tissues with their baneful and destructive effect. By giving it intravenously definite, positive, and rapid results are obtained, thus saving the physician and family much worry and the patient much suffering, the course of the disease is decidedly shortened and complications and sequelæ are reduced to a minimum.

#### DOSAGE.

For a child from two to four years of age, where the disease is not very severe and not of the laryngeal type, I usually give one thousand units, for children over that age, two to four thousand units are usually given. If the disease does not show marked improvement within six hours, the dose is repeated, however, it will rarely be necessary to repeat the dose. For convenience the median cephalic or median basilic vein is usually selected for introducing the needle, using the necessary aseptic precautions. The regular antitoxin syringe and needle are not suitable for giving the serum intravenously, and I usually use my ordinary Luer hypodermic syringe and needle. If the syringe is too small to hold the amount desired to be given, a larger Luer syringe is secured. If the antitoxin is highly concentrated, it may be diluted with normal salt solution. To facilitate drawing the serum into the Luer syringe, the needle furnished with the antitoxin is passed from the opposite end until the serum is reached, thus allowing air to replace the antitoxin as it is withdrawn into the syringe through the hypodermic needle. Before the antitoxin is administered, it should be brought to or a little above the body temperature. The child is then placed preferably on its back in a well lighted room or place and the vein is made to stand out by placing a tourniquet just above the bend of the elbow and flexing and extending the forearm a few times. When the vein can be felt or seen distinctly, sterilize over the proposed site of introduction and introduce the needle into the vein, gently withdraw the piston, and, if the vein is entered, blood will follow back into the syringe. Then release tourniquet and slowly introduce the antitoxin. This operation is completed without pain,

the only discomfort being the little prick of the needle going through the skin.

There is every argument for and but little against giving antitoxin by this method. Once used the physician will rarely ever go back to the older methods of giving it unless he is unable to find the vein, which sometimes happens. There is no more danger in giving it this way than in the older methods, but quite often, however, there are some reaction phenomena, which is without danger and which consists of a slight cold spell with sometimes a light rigor, both of which pass off rapidly. The reaction, if it appears, usually comes on within half an hour and passes off in ten or fifteen minutes and needs no treatment.

#### ILLUSTRATIVE CASES:

About two years ago I was treating a child with laryngeal diphtheria whom I saw late in the disease. Its condition was grave and did not yield to antitoxin given the usual way, its condition continued to grow worse, and intubation seemed to be the only course to pursue. I called for consultation, and after consideration, the consultant and I decided to give a dose of antitoxin by the vein, which we did, and within a few hours, the symptoms were so relieved that the child was breathing normally, and it made an uneventful recovery without further treatment.

Called to see Percy M., aged three years, about noon, found temperature high, pulse accelerated, tonsils showed membrane, diagnosis diphtheria. Swab was taken and laboratory report later confirmed diagnosis. One thousand units given by vein and temperature dropped to normal within a few hours, and late in afternoon child was up. The next morning on calling, found child up playing, temperature and pulse normal and no membrane in throat.

Bessie S., eight years of age, had an indefinite condition of throat, diagnosis doubtful, but antitoxin given by vein. Swab taken and laboratory report later showed diphtheria. Mother reported next morning that child was all right and no use to call.

Hazel J., aged two, eight miles in country, informed when called that child was choking to death with croup. Found child cyanosed and in great distress with laryngeal diphtheria of several days standing. Gave two thousand units of antitoxin and patient made a rapid and uneventful recovery. Could report many more cases with like results, but these will suffice.



In giving antitoxin intravenously there is no pain or soreness whatever, there is great rapidity of therapeutic action, the dose rarely has to be repeated, the child soon begins to feel well, the membrane quickly disappears, complications and sequelæ are prevented, and there is much saving of antitoxin expense which should not be lightly disregarded.

I have read with keen delight Dr. Curtis Welch's report of the epidemic of diphtheria that recently occurred in Nome, Alaska, which report appeared in the Journal of the American Medical Association in the issue of April the 25th, 1925. And, I recall vividly how shrewd newspaper correspondents played dramatically upon the public mind and had the whole country thrilled and awe stricken, and how they immortalized certain individuals and dog teams in that bleak and snow beridden country; and it is not my purpose to detract one iota from them, for they all deserve credit. But the one thing that stands out above all others is that scientific medicine and the physician are pre-eminent when a grave crisis confronts a community or nation.

A physician should be bold, but cautious, sincere and earnest, whole-hearted and unselfish. I have lost a few cases of diphtheria that I fully believe could have been saved had antitoxin been given intravenously. We should have our faith firmly established, and continue to press forward, remembering the glorious traditions of the profession and the vital part it is playing in making this nation. We must not let the records of our achievements fade before our eyes, but keep ever onward and upward with our imagination quickened and our optimism strengthened.

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#### PERNICIOUS VOMITING\*

EDWARD P. ALLEN, M.D.  
OKLAHOMA CITY

One of the most serious complications of pregnancy is vomiting. Due to the high mortality, in some hospitals as high as thirty per cent of the more severe cases, a great amount of research work has been carried on in the past few years. Statistics show that fifty per cent of these cases are in primipari and about fifty-three per cent occur in the first trimester of pregnancy.

Twenty per cent or more of the multipara give a history of having had the same complication during other pregnancies. It has also been brought out that the mortality is directly in proportion to the duration and severity of the symptoms.

These cases all give a history of nausea from one to five days prior to the vomiting. This may occur at any time during the day, but most frequently in the morning. It then progresses to the vomiting stage and varies from one attack daily in the morning to numerous vomiting seizures in which nothing taken by mouth is retained. The latest authors divide this condition into two classes: neurotic and toxic. I am of the opinion that most of them start with the neurotic type. The vomiting and the lack of food in the stomach causes an increased flow of hydrochloric acid, which irritates the nerve endings in the mucus lining of the stomach and in this way the vomiting continues and due to the starvation and associated chemical histological changes that take place in the body, the glycogen reserve is used up and the patient begins digesting her own fats, and the case then becomes toxic.

Although no completely satisfactory explanation other than the neurotic element has been brought out to account for the more mild degrees of the nausea and vomiting, the work of recent years by Frank Cook and Harding on the pernicious type of vomiting is to be commended. It is probable that the glands of internal secretion may act directly or indirectly through the sympathetic nervous system and play a part in causing this condition. One of our physicians, Dr. A. W. White, suggested that he had never known of a case of severe vomiting of pregnancy where there were any signs of hyperthyroidism. If this be true, then it would behoove us to make a more thorough investigation of the glands of internal secretion as a possible cause of this condition. In the more severe cases the liver is unquestionably the organ which is primarily involved, altho, just what brings this disfunction we do not know. It has been suggested that in some manner the liver becomes incapable of storing up glycogen and due to this disability it is unable to detoxify substances from the intestinal tract and an acidosis or ketosis follows. Focal infections by lowering the resistance of the patient and the continuous absorption of toxins may be considered as a possible cause and every method should be used to locate and re-

\* Read before the Section on Obstetrics and Pediatrics, Annual Meeting, Oklahoma State Medical Association, Tulsa, May 12, 13, 14, 1925.

move the foci, however, in a large percentage of my patients I have been unable to find any definite foci of infection.

In the early cases there is no deviation in the blood chemistry findings, but later there is an increase in N. P. N. and uric acid in the blood. Harding and Drew believe this to be due to the dehydration following continued vomiting and to an impairment of renal function resulting from the lack of available waters. When the anhydraemia and oliguria have been overcome by therapeutic reinforcement of fluids a reduction of the blood constituents in question was found to accompany diureses. Other than for the above changes and a slight increase in acetone and diacetic acid the blood chemistry is of no avail.

I do not believe there is any renal change until very late. This rather than being a cause is the result of the dehydration. The albumen found late is only a transitory affair and clears up immediately when the fluid intake and ketosis is handled.

In the treatment of these cases we are trying to forget that they are pregnant and treat them for the toxæmia or acidosis. We have a series of about five or six cases, three of which were treated twelve or eighteen months ago and have since delivered normal babies at term.

Case No. 1. Parathree with a history of having pernicious vomiting, twice before entered the hospital and was given rest in bed, colonic flushings, soda-glucose drip with bromide and choloral, gastric lavage, corpus luteum, etc. She continued to grow worse, vomiting continuously, and vomited a coffee ground material and pure blood. She was also passing blood from the vagina. The case looked like abortion was inevitable and we considered the patient too sick to operate at this time so she was given an intravenous injection of fifteen per cent glucose solution, about 600 c.c. Fifteen minutes after starting the injection 10 units of insulin was given by hypo, one hour later, ten more units, and four hours later, five more units. In the afternoon of the same day the patient was allowed to take sips of water which she retained but complained of being nauseated. At night, fruit juices were added which she retained and enjoyed. The following morning she was allowed a dry breakfast consisting of dry toast or shredded wheat biscuit. Liquid and solid foods were gradually added every three hours and the patient was allowed to go home, ten days later, cured. Occasionally, how-

ever, she complained of morning nausea and vomiting but acetone and diacetic acid were never found in the urine four hours after the insulin was given.

Case No. 2 and 3 were practically parallel to the above and will therefore not be described in detail.

Case No. 4 was that of a primipara, age 21, ten weeks pregnant, with a history of having vomited everything she had taken, including water, for the past three weeks. She had had all the treatment that could be given her in the home. I believe she was one of the sickest girls I have ever seen. She was emaciated, thin, pale, eyes were sunken, pulses small, rapid and easily compressible, B.P. 90 over 60, teeth and gums showed sordes, tongue was dry, coated and looked parched, throat was painful, dry and the vocal cords were so oedematous that she had not been able to speak above a whisper for several days. The abdomen was scaphoid, the ribs, scapula and hips protruded. She was sent to the hospital and without waiting for a complete laboratory report was given seven hundred c.c. of a fifteen per cent glucose solution intravenously, through a period of one and one-half hours. Twenty minutes after the injection was started 10 units of insulin was given and one hour later 10 more units. She was allowed orange juice by mouth before she left the dressing room, this, however, she vomited. Four hours later the urine was examined and showed four plus glucose and ten additional units were given. Sips of water and fruit juices were given all night and she had her breakfast the following morning of dry toast and coffee. She was fed regularly every three hours and went home two weeks later very much improved, eating fairly well but still showed some acetone in the urine. The patient was in my office the other day looking so much better, complaining only of being unable to get enough to eat and drink and slightly weak in the knees.

In my opinion the Thalhimer Method is by far the best means of administering the glucose insulin, 1000 c.c. of 10% solution of glucose (100 grams of glucose per 1000 c.c.) is given over a period of three or four hours running in between 200 and 300 c.c. an hour. It is very important to use only pure tested glucose and the solution must be kept warm. Fifteen minutes after the injection is started, ten units of insulin is given hypodermically, and at intervals of from one to four hours, ten addi-



tional units of insulin is given until we have given thirty units. One unit of insulin causes the utilization of from two or three grams of glucose. It is wise to have some adrenalin present to be given in case of hypo-glycemic reaction.

In conclusion let me say that I do not believe we have found a "cure all" for pernicious vomiting in pregnancy, neither do I believe that therapeutic abortion for the above condition can be eliminated.

Insulin should not be given indiscriminately for vomiting of pregnancy and should only be given in case of severe acidosis where all other treatments have failed. I do not believe it will be of any benefit in cases where there is a marked degeneration of the liver and kidneys.

The results are so rapid and distinct that I would suggest that while you are making preparation to do a therapeutic abortion try some glucose and insulin as above described and it may be possible that the operation will be unnecessary.

#### RECTAL EXAMINATION IN LABOR; AS A DIAGNOSTIC PROCEDURE AND ASEPTIC PRECAUTION\*

W. A. DEAN, M.D.  
TULSA

This paper has been written with the hope that what it contains and any points brought out in its discussion will materially aid in lowering our morbidity and mortality rate in obstetrics. Also, endeavoring to elevate this specialty to a higher status.

The committee on maternal welfare of the American Association of Obstetricians, Gynecologists and Abdominal Surgeons for 1923, give us the following statistics: Boston had one mother to die in every one hundred and thirty births; the State of New York from 1915 to 1921, inclusive, shows a death rate from all puerperal causes, 54.9 per 10,000. In New York City for the same period the rate was 46.1 per 10,000. Michigan for 1922 had a maternal death rate of 67 per 10,000 births; while Kansas City shows a maternal mortality from all puerperal causes of 73 per 10,000 deliveries.

The Department of Commerce in its bulletin announces a slightly higher death rate for 1923 than in 1922, being 6.4 per 1,000 births as compared with 6.2 in 1923.

Doctor Dublin, the Actuary of the Metropolitan Life Insurance Company, shows that 45 per cent of all women dying in child-bed in this country, succumb to infection, and C. A. Witmer, writing in Journal of Medical Association of Georgia, states the family histories of 5,000 applicants for life insurance, show that one man out of every seventeen had a mother or sister, or both, to die from the immediate effects of child birth.

These figures are far above what they should be, coming next to tuberculosis, in the causation of maternal deaths. It seems that maternal mortality in labor could be materially reduced if methods of examination were used where the least possible chance of infection could take place.

Obstetrics has been one of the slowest, if not the slowest branch of surgery to develop the art of asepsis.

Oliver Wendell Holmes of America, and Semilweis of Germany, some seventy years ago began, unknown to each other, epoch-making studies on puerperal infection. The latter's clinic had a higher mortality rate than that of the midwives practicing in his city. After an exhaustive study he found the source of his infections and instituting the best methods of asepsis and using the most potent antiseptics obtainable at that time, he was enabled to reduce his mortality and morbidity rate below that of the midwives.

As the art of asepsis and better antiseptics have been developed, then later with the advent of rubber gloves, the mortality rate in puerperal infection should be reduced to the minimum. However, as the above figures show, the percentage of puerperal infections are far above what they should be.

In 1893, Reis of Chicago and Kronig of Leipsic, began advocating the rectal as a substitute for vaginal examinations in the progress of labor. It was not until the manufacture of rubber gloves that the rectal examination really became recognized, though even today it is being used by a very small minority of the profession in following the progress of labor.

Advocates of the rectal examination are not so radical as to say it can ever supplant the vaginal, though it can be used in conjunction with abdominal examination in 90 per cent of labor cases. There are certain exceptions to the use of rectal examinations which must be kept in mind:

\* Read before the Section on Obstetrics and Pediatrics, Annual Meeting, Oklahoma State Medical Association, May 12, 13, 14, 1925.

1. If placenta praevia or unusual bleeding takes place, vaginal may be necessary to clear up the situation.

2. Occasionally we get very obese patients, particularly primiparae where the structures and tissues will not allow the examining finger depth sufficient to identify or reach the cervix and the presenting part.

3. An abnormal presentation which will not come down into the pelvis will not bring the cervix within reach of the examining finger. Excluding the aforesaid exceptions, the rectal combined with the external, or abdominal examination, should be the preferable procedure, in following the progress of labor.

Wm. Kerwin of St. Louis is quoted as saying before the St. Louis Medical Society, that rectal examination should be the method of choice, and combined with external examination will suffice in the vast majority of the cases to conduct labor intelligently and successfully from the beginning to the end. He also states that it would not be too optimistic to say that the general adoption of rectal examination in labor by the rank and file of the profession is apt to bring about the long hoped for reduction in puerperal sepsis.

The technique used is simple and brief: A clean glove is slipped on right or left hand, as the examiner desires. The index finger is well lubricated, that finger being gently inserted, under direct vision, into the rectum, preferably during a pain as you will find the rectum more patulous then. The cervix is dilated, giving you an accurate idea of the degree of dilatation, in finger breadth, inches or cm., that has taken place. As the pain subsides, the cervix thickening again reassures the examiner that his finger was in the cervix, and he was not palpating the thinned-out lower anterior uterine segment, which is quite often the case for one beginning the practice of rectal examinations.

The same information can be gained by rectal examination as by the vaginal examination, excepting those enumerated above. One can determine the presenting part, whether head, face, brow, breech, hand or foot; its degree of descent; whether the presenting part is movable and floating, or whether fixed and deeply engaged. The cervix is outlined, estimating degree of dilatation that has taken place, whether the cervical lips are thinned out, or thick and hard. Sometimes it takes per-

sistence to reach the cervix if it has been displaced backward, or presenting part has not engaged sufficiently to bring the cervix within reach; but by lowering your hand and pushing the finger well in and backward, then hooking the digit forward, quite often, the cervix can be brought anteriorly for a more careful examination. "The beginner must be cautioned against not identifying exceedingly thinned-out cervixes, or being misled by wrinkles on the caput."

Where a dilating bag has been introduced, its progress can be accurately estimated by gentle traction on the tube with one hand and palpating the cervix with the examining finger of other hand.

Information yet to be gained by rectal examination: Are the membranes intact? Have you a prolapsed arm, foot or cord, and is the cord pulsating?

The advantages of rectal examination are as follows:

1. It is a great time-saver. A clean glove can be slipped on and lubricated while the patient is being draped.

2. The dangers of infecting your patient are greatly reduced where precaution is used to insert the examining finger under direct vision and not allowing a careless thumb or finger to enter the vulval lips, in your efforts to make your findings.

One might be led to believe the rectal examination would injure the rectal mucosa, causing an infection to pass through the cellular tissue, but Ralph A. Reis, writing in American Journal of Obstetrics and Gynecology, quotes Fuerst as having done rectal examinations on 18,000 patients, with no injury to rectal mucosa, this being proven by the proctoscope in a large number of these patients, and by controls.

In conclusion: I urge that we all make a united effort in lowering our morbidity and mortality rates, by using the rectal examination in the progress of labor, and thereby reduce the percentage of deaths and invalidism in our child-bearing women.

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#### AMERICAN BOARD OF OTOLARYNGOLOGY

The next examination given by the American Board of Otolaryngology will be held at the Cook County Hospital, Chicago, on October 19, 1925. Application should be made to the Secretary, Dr. H. W. Loeb, 1402 South Grand Boulevard, St. Louis, Missouri.



# THE JOURNAL

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DR. CLAUDE A. THOMPSON.....Editor-in-Chief  
Barnes Building, Muskogee, Okla.

DR. P. P. NESBITT.....Associate Editor  
814 Surety Building, Muskogee, Okla.

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fair reciprocity.

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## EDITORIAL

### PROPOSED CHANGE IN CONSTITUTION AND BY-LAWS.

Within the next few months, in ample  
time for its consideration during the active  
winter months of county medical societies,  
there will be submitted to our membership  
an entirely new and revised version of the  
Constitution and By-Laws, which the  
House of Delegates ordered submitted at  
the Tulsa meeting. This matter should be  
given close attention by every constituent  
society, for there are many changes writ-

ten into the new proposals. Among these  
is one making county society membership  
follow each move of any member from one  
society jurisdiction to any into which he  
may move. This is deemed to be best, for  
on many occasions members moving into  
other counties in the State have been de-  
nied affiliation without opportunity for  
redress. It would seem that at least some  
sort of charge should be filed in such cases  
and proper hearing given, as a basis for  
refusal of membership. In these instances,  
usually, the society from which the mem-  
ber moved retains him as a member, and  
while he loses no rights, there is left a  
feeling of bitterness on one side or the  
other that might be obviated by a full  
hearing. New committees with broad  
powers are proposed, this in the hope that  
hereafter we may have more constructive  
work that we had in the past. The question  
of a full time Secretary-Treasurer-Editor  
should be approached with every degree of  
caution and prior consideration. This will  
almost surely call for a raising of the dues.  
Probably our dues will have to be raised  
eventually if we are to properly perform  
all the functions a society should perform,  
but just what activities we should under-  
take has always been a matter bringing  
out a sharp division of opinion in our mem-  
bership. This division should be had now,  
at once, rather than be left as a future  
source of dissatisfaction. On this score  
we can struggle along very nicely as we  
are, but it is a question if we should re-  
main as we are and possibly stagnate into  
mere routine. The changes proposed have  
been given long consideration by the com-  
mittee in charge, and they, after consid-  
erable work are not entirely certain as to  
many possible changes. They seek no  
great innovations, but have tried to write  
into the document the things thought most  
fitting to the state of Oklahoma Medicine  
as it now stands.

### MEDICINE'S NEW DAY

Medical doctors of Texas have decided  
to advertise, not as individuals, but as a  
group. This extraordinary development  
bears the authorization of the State's Med-  
ical association, and the copy is to be digni-  
fied statements intended to distinguish  
allopaths from rival practioners.

One recommendation is that the names  
of members of county medical associations  
be published at intervals in county news-  
papers, as sufficient notice to the public.

Another proposal urged is that material of an educational nature concerning common diseases be printed in local newspapers for the public good.

Medicine has been a mystery to the average man through history. From mystery has come hocuspocus, fraud, exploitation of the afflicted, misery intensified. It is a day to celebrate when legitimate medicine has come frankly before the people, discarding all the old veils that concealed so much deception, both within the ranks of allopathy and rival to it. The public is most certain to appreciate this innovation, instituted in Texas and certain to spread. If it separates the goats from the sheep the angels should sing, if it tends to bring medicine into the intelligent rather than the blind service of average men and women and their children, therapeutic science will have made an incalculable advance. In this movement to advertise legitimate medical men, journalism, not for selfish ends, but from the highest public motives, should lend its best promotion talents.—*Editor and Publisher.*

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### *Editorial Notes—Personal and General*

DR and MRS. F. A. McMAND, Oklahoma City, are spending a month motoring through Colorado.

DR. and MRS. A. H. BUNGARDT, Cordell, who have been visiting in the East, have returned home.

DR. and MRS. I. W. BOLLINGER, Henryetta, spent a three weeks vacation at various points in New Mexico.

DR. and MRS. J. B. CARMICHAEL, and son, Duncan, are making an extended motor trip through the Southern States.

DR. J. W. CRAIG, Vinita, has received his sixth consecutive appointment as State Medical Director of the Modern Woodmen of America.

DR. and MRS. OKEY S. SOMERVILLE, Bartlesville, have returned from a ten days trip to Breckenridge and Wichita Falls, Texas.

DR. and MRS. E. S. FERGUSON, and son Haven, Oklahoma City, who have spent two months in Europe during the summer, returned the latter part of August.

DR. EARL D. McBRIDE, Oklahoma City, has removed his clinic to 717 North Robinson street. The new building is owned by the Clinic and entirely new equipment has been installed which will enable it to render better service in their line of work, that of Bone, Joint, and Accident Surgery.

DR. and MRS. WILBER E. RAMMEL, Bartlesville, have made a motor trip through the East.

ST. JOHN'S HOSPITAL, Tulsa, will open four wings of the new hospital building the latter part of October.

DR. CARROLL M. POUNDERS, Oklahoma City, has been appointed full-time school physician for the Oklahoma City schools.

DR. and MRS. LEONARD WILLIAMS, Pawhuska, returned from a two weeks motor trip to the Eastern States and Canada.

DR. and MRS. WILLIAM H. SHIPMAN, Bartlesville, are making a three weeks motor tour through the Eastern States and Canada.

DR. R. W. HOLBROOK and two sons, Perkins, went to Flint, Mich., where they purchased a new car and motored to Kentucky, to visit relatives.

DR. ROSS D. LONG, Oklahoma City, City Physician, has been appointed official physician for the federal prisoners confined in Oklahoma City.

DR. JOHN P. TORREY, Bartlesville, is spending a vacation in Northern Michigan, Dr. E. E. Beechwood acting as locum tenens during his absence.

DR. RAYMOND L. MURDOCK, Oklahoma City, has returned from abroad and from the National Guard encampment, and assumed his duties as secretary-treasurer of the Oklahoma County Medical Association.

THE MEDICAL SOCIETY OF THE MISSOURI VALLEY will meet in St. Joseph, September 30, October 1 and 2, according to announcement of Dr. Chas. Wood Fassett, secretary. Many well known medical and surgical celebrities of the country are on the program.

TULANE UNIVERSITY OF LOUISIANA, GRADUATE SCHOOL OF MEDICINE, New Orleans, is now completely reorganized to meet the requirements of the Council on Education of the A. M. A. Attention is called to their advertisement on another page of this JOURNAL.

DR. A. M. BUTTS, Holdenville, qualified as an expert bill collector when he received a check for \$25 from a former patient now living in California; the bill having been on the doctor's books since 1913. The patient admits that the bill should have been paid long ago, and thanks the doctor for waiting.

The SOUTHWEST BRANCH of the AMERICAN UROLOGICAL ASSOCIATION at its meeting in Denver, elected Dr. W. J. Wallace, Oklahoma City, president; Dr. McClure Young, St. Louis, Mo., vice-president, and Dr. Clinton K. Smith, Kansas City, Mo., secretary. Oklahoma City was selected for the 1925 meeting on November 8th and 9th, the latter being the only day devoted to scientific work, with a banquet in the evening at the Oklahoma Club. The members will leave on the night train for Dallas to attend the Southern Medical Association meeting.



DR. JOHN I. GASTON, and family, Madill, motored to Ohio to visit relatives in August.

DR. HUGH D. STITES, Muskogee, Veteran's Hospital, attended the Ft. Sill encampment in August.

DR. J. V. ATHEY, and family, Bartlesville, are spending September in New York City visiting relatives.

DR. GEORGE V. DORSHEIMER, Dewey, spent the month of July in New York City doing post graduate work.

DR. WILLIAM H. KINGMAN, Bartlesville, was doing post graduate work in New York City during July and August.

DR. S. E. MITCHELL, U. S. Veteran's Hospital, Muskogee, attended the Medical Officers Training School, San Antonio, in July.

DR. J. D. OSBORN, City Health Officer of Frederick, reports that the city water supply is free from dangerous infection.

DR. HARRY C. WEBER, Bartlesville, will leave the latter part of September for Wyoming with a party of big game hunters for bear, moose and elk.

DR. C. E. WILLIAMS, Woodward, has been elected secretary-treasurer of the Woodward County Medical Society, succeeding Dr. C. W. Tedrowe, who moved to Enid.

DR. J. CLAY WILLIAMS, Bristow, who was located at Mercedes, Texas, for a short period, has returned to Bristow, and is associated with the Bristow Emergency Hospital as Secretary-Treasurer and General Manager.

DR. A. S. RISSER, Blackwell, made his vacation trip to Rockaway Beach, Branson, Mo., during August. He modestly confessed that he was not the "sole author" of the fish picture mailed the JOURNAL, but that there were confederates about. Yes, no doubt there were—with a net.

SOUTHEASTERN OKLAHOMA MEDICAL ASSOCIATION met in Durant in July and had a very good program, reporting the best program since organization five years ago. Dr. F. L. Watson, McAlester, was elected president, and Dr. John A. Haynie, Durant, secretary-treasurer.

McINTOSH COUNTY MEDICAL SOCIETY met at Checotah September 8; program: Heart Clinic, with report of cases; Dr. R. A. Wolford, Muskogee, demonstrated new methods of diagnosis; General Discussion of Fever, with pertinent remarks by Dr. J. H. McCulloch, County Superintendent of Health.

DR. and MRS. J. HUTCHINGS WHITE, Muskogee, have returned from an extensive trip to Europe. They accompanied the International Surgical Assemblature, of which Dr. White was a member. Their itinerary included Canada, Scotland, England and all important clinical surgical center of Continental Europe.

DR. G. C. COMP, Manitou, who was seriously ill in July, is reported as improved.

DR. F. B. FITE and family, Muskogee, spent August among the Minnesota Lakes.

DR. A. L. MOBLEY, Veterans Hospital, Muskogee, attended the Fort Sill encampment in August.

DR. C. P. MURPHY, Muskogee, attended the Medical Officers Encampment, Ft. Sill, during August.

DR. CHAS. W. HUGHES, Clinical Director, U. S. Veteran's Hospital, Muskogee, visited Denver in August.

DR. L. A. MITCHELL, Frederick, attended the Medical Officers Reserve meeting at Fitzsimmons General Hospital, Colorado, in August.

DR. J. H. MOORE, Hobart, who has been appointed a Captain in the Officers Reserve Corps (Medical) has returned from attendance on the intensive summer course in Ophthalmology and Otolaryngology given in Denver in August.

DR. ROBERT B. HILL, Major, Medical Corps, U. S. Army, after several years of preeminently satisfactory service as medical officer of the 95th Division at Oklahoma City, has been relieved of duty and ordered to the Walter Reed General Hospital, Washington, D. C. During his stay here, Dr. Hill has made scores of close friends in the medical profession. This friendship resulted in the greatest benefit to the medical reserves of the Army. He had the faculty of securing the fullest cooperation where probably many men would have failed. It is with sincere regret that we lose Major Hill.

#### DOCTOR LEO A. O'BRIEN.

Dr. L. A. O'Brien, Skiatook, died at the Christian Church Hospital, Kansas City, Mo., August 6th, as a result of heart disease. Born in Kansas City, Mo., February 19, 1881, he received his literary education at St. Benedict's College and Westport High School, after which he graduated in medicine at the University Medical College in 1903. After serving internships at the Puntun Sanitarium and the Kansas City General Hospital, he was employed by the M. K. & T. Ry. Co. for a year, practicing in Tulsa a year, then located in Skiatook where he has resided and practiced for eighteen years. He was very successful financially as well as professionally, and had amassed large interests in Tulsa, Skiatook and Pawhuska. He was vice-president of the Oklahoma National Bank, Jenks, and president of the First National Bank, Barnsdall. Funeral services were held at the Holy family Catholic Church and interment in the Rose Hill Cemetery, Tulsa. He leaves a widow, two daughters and two brothers and sisters who mourn his untimely passing in the prime of life and when he was at his most useful state.

### DOCTOR ARCH A. K. WEST.

Dr. A. K. West, Oklahoma City, is dead. Death occurred at Salina, Colo., where he had been called by the death of his mother.

Born at Waynesboro, Miss., July 9, 1865, his literary education was obtained in the public schools of that country, after which he graduated in medicine from the Memphis Hospital Medical College, March 27, 1894, where he won first prize for general proficiency in his studies. Locating in Smithville, Texas, immediately, he practiced at that point until 1899 when he moved to Oklahoma, locating at Oklahoma City, where he built up a large general practice and numbered his friends and admirers throughout the State. For many years he was in charge of all medical and surgical work of the Oklahoma City Railways, modelling his work for that organization along very modern and satisfactory lines. He was connected with the old Epworth University Medical School, from which sprung our present medical department of the University of Oklahoma. In this work he was always a leader and sage advisor as well as taking his part in the years of tedious constructive work through which medical education struggled. Dr. West was, from the time of his arrival in Oklahoma Territory, an active member in all work of medical organization. A past president of the Oklahoma State Medical Association, as well as a member of many other state and national organizations. He was the father of Dr. Willis K. West, one of Oklahoma City's prominent orthopedic surgeons. The writer feels sincere regret at the passing of this able man. During many years of acquaintance Dr. West was a good personal friend and advisor. A special meeting of the Faculty of Oklahoma University of which he had been a member since organization was held and tributes to their departed friend were made by Drs. LeRoy Long, Dean A. L. Blesh, J. A. Hatchett and S. R. Cunningham, all of whom had been his intimates socially and professionally for many years. A committee of the Faculty drafted the following resolutions:

#### RESOLUTIONS OF THE FACULTY OF THE SCHOOL OF MEDICINE ON THE DEATH OF DR. A. K. WEST.

A friend of man has fallen. Death has again with tragic touch beckoned one of our faculty, as in the case of the one who preceeded him the touch was gentle. One moment, pulsating with Life, the next the Silent Corridor and Good-bye. What could be kinder? No memories to the loved ones of hours, days or months of pain and agony. This gentle call came to our friend, Dr. A. K. West.

The work of Dr. West most surely lives and is not interned with his body. It lives in the School of Medicine which largely owes its existence to his early vision and untiring and unselfish efforts. There is no measure

by which the value of this work to mankind can be estimated.

He leaves a better profession than when came into the State. He had a hand in the organization of the profession along scientific lines from practically a disordered mob consisting of many good physicians working without concert.

He lives in the hearts of the physicians of the country to whom he was always the friend.

He lives and will always live in the hearts of his friends, professional as well as lay, for he WAS A FRIEND.

Above all he lived in the hearts of his sorrowing family to whom his loss is inestimable. Beyond all he was a family man.

He was calm, in adversity, modest in success and capable always. Good friend, good-bye.

Be it resolved that a copy of these resolutions be spread on the Records of the Faculty of the School of Medicine, that a copy be furnished the daily press of Oklahoma City, that a copy be sent the State Medical Journal for publication and a copy be furnished the family.

A. L. BLESCH  
J. A. HATCHETT  
A. B. CHASE.

### DOCTOR J. ALLEN PERISHO.

Dr. J. Allen Perisho, for many years a practitioner at Cache, died suddenly at his home August 24th. His remains were buried at Luther, after funeral services at Cache. He is survived by his widow and one daughter, and four sisters, the latter residing in widely separated states. The cause of death was heart disease.

Dr. Perisho was born at Oakland, Ills., May 3, 1863. After receiving a common school education he attended the Miami Medical College, where he graduated April 1, 1891. He practiced at Westfield, Ill., until 1898, when he moved to Luther, practicing there for a time, then moving to Cache where he has since resided. Dr. Perisho had a wide circle of friends in Comanche county, enjoyed a large general practice, and was regarded as one of Comanche county's best citizens. He was affiliated with the Christian church and the Odd Fellows.

The poet Byron had a clubfoot, which caused him a lifetime of embarrassment. Talleyrand had a clubfoot, which may have been partly responsible for the distorted look he had on life. Such misfortunes can be avoided today.—Hygeia.

If a child is cross after meals he may be eating too heavily or perhaps his diet has been unwisely balanced for several days, either containing too much starch or too much acid, or what is more commonly the immediate cause of his testiness, he is probably constipated.—Hygeia.



## BOOK REVIEWS

**A MANUAL OF GYNECOLOGY**, by John C. Hirst, M.D., Associate in Obstetrics, University of Pennsylvania. Second Edition, Revised. 12mo. of 508 pages with 195 illustrations. Philadelphia and London: W. B. Saunders Company, 1925. Cloth \$3.50 net.

This new edition, among other changes made since the first edition was issued, contains information on the Rubin Test for Sterility, systoscopy and pyelography, the technic for use of radium in various fields, diathermy in gonorrhoeal cervicitis, revision of the chapter on endocrine therapy, a new chapter on backache, reclassification and complete revision of the chapter on ovarian cysts; x-ray photography of the pelvic organs, granuloma inguinale, foreign protein injections; the chapter on plastic operations is rewritten, and there are many new facts added to an already useful volume on gynecology.

**PERSONAL AND COMMUNITY HEALTH**, by Claire Elsmere Turner, Associate Professor of Biology and Public Health in the Massachusetts Institute of Technology; Associate Professor of Hygiene in the Tufts Medical and Dental Schools; Sometime Member of the Administrative Board in the School of Public Health of Harvard University and the Massachusetts Institute of Technology; Fellow American Public Health Association; Major, Sanitary Corps U. S. A. (Reserve). Illustrated, Cloth 426 pages. Price \$2.50, C. V. Mosby Company, St. Louis.

Turner lists as the "Three Great Plagues", tuberculosis, syphilis, and colds. Reflection brings agreement with the idea. They are certainly great destroyers of human life, all their wide ramifications remembered. The book is beautifully illustrated, mostly original, and it will prove of interest to those interested in Public Health work and personal hygiene. Preventive measures, of course, are fully considered.

**PREVENTIVE MEDICINE** (Second Edition) by Mark F. Boyd, M.D., C. P. H., Member of Regular field Staff, International Health Board of Rockefeller Foundation; formerly Professor of Bacteriology and Preventive Medicine in the Medical Department of the University of Texas. Second Edition, Revised. Octavo volume of 429 pages with 135 illustrations. Philadelphia and London: W. B. Saunders Company, 1925. Cloth \$4.00 net.

This edition contains thirty-seven chapters covering the well known subjects of preventive medicine. While every effort has been made, and successfully, to condense the material into compact form, no useful thing has been eliminated, and the

text is thorough enough to satisfy the exacting. It is finely illustrated. The chapter on sources of infection lays a fine ground-work for the subjects considered. Dissemination, contact transmission, diseases transmitted solely by contact, those usually transmitted by contact, frequently transmitted, general measures of control, disinfectant, excreta disposal, water and health, water and milk purification, food infections, insects and their transmission of disease, those transmitted by lower animals and other sources of infection are considered in the first section. There are sections on deficiency and occupational diseases, special aspects of hygiene and sanitation, demography and public health. The work should be of interest to everyone interested in preventive medicine.

**AMERICAN ILLUSTRATED MEDICAL DICTIONARY (DORLAND)** New (13th) Edition, Revised and Enlarged. A new and complete Dictionary of terms used in Medicine, Surgery, Dentistry, Pharmacy, Chemistry, Veterinary Science, Nursing, Biology, and kindred branches; with the Pronunciation, Derivation, and Definition. Thirtieth Edition, Revised and Enlarged. Edited by W. A. Newman Dorland, M.D. Large octavo of 1344 pages with 338 illustrations, 141 in colors. Containing over 2500 new words. Philadelphia and London: W. B. Saunders, 1925. Flexible Binding, \$7.00 net; thumb index, \$7.50 net.

**A TEXT BOOK OF GENERAL BACTERIOLOGY**, Eighth Edition, Thoroughly Revised, by Edwin O. Jordan, Ph.D. Professor of Bacteriology in the University of Chicago and in Rush Medical College. Eighth Edition, thoroughly revised. Octavo of 752 pages, fully illustrated. Philadelphia and London: W. B. Saunders Company, 1924. Cloth \$5.00 net.

**PHYSICAL CHEMISTRY IN BIOLOGY AND MEDICINE**, by J. F. McClendon, Ph. D., Professor of Physiologic Chemistry, University of Minnesota Medical School, and Grace Medes, Ph.D., Assistant Professor of Physiologic Chemistry, University of Minnesota Medical School. Octavo of 425 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1925. Cloth, \$4.50 net.

**METHODS IN SURGERY**. Used in the Surgical Divisions of Barnes Hospital, St. Louis Children's Hospital, and Washington University Dispensary; Including Outlines for Case History-Taking, Preoperative and Postoperative Care of Patients, Routines, Diets, Etc., by Glover H. Gopher, M.D., Instructor in Surgery, Washington University School of Medicine; Clinical Assistant to Barnes Hospital; Surgeon to Out-Patients, Washington University Dispensary; Visiting Surgeon, St. Louis City Hospital. Cloth, 232 pages. Price \$3.00, C. V. Mosby Company, St. Louis.

This work contains full and detailed rules adopted for the care of surgical cases at their various stages as adopted and in

use by the author and his colleagues in the institutions indicated. It is replete with scores of suggestions on the "little things" to much disregarded, if the patients' comfort and well-being is the prime object of treatment.

**EYE, EAR, NOSE AND THROAT MANUAL FOR NURSES**, by Roy H. Parkinson, M.D., visiting Aurist to St. Joseph's Hospital, San Francisco. Calif. Illustrated. Cloth, 207 Pages. Price, \$2.25. C. V. Mosby Company, St. Louis.

This little volume is intended as a guide for the use of Nurses Training Schools. It is especially concerned with operating room technic, preparation of instruments and operative procedures.

**OLD AND NEW VIEWPOINTS IN PSYCHOLOGY**, by Knight Dunlap, Professor of Experimental Psychology in the Johns Hopkins University. Cloth, 166 Pages. Price \$1.50. C. V. Mosby Company, St. Louis, Mo.

This little volume consists of three public lectures at the University and two papers read before the Southern Society for Philosophy and Psychology. The lectures were on Mental Measurements and Present Day Schools of Psychology; and The Psychology of the Comic; the papers on the Psychological Aspects of Spiritualism and the Reading of Character From External Signs.

**EMPHYEMA THORACIS**. Some Fundamental Considerations in the Treatment of Empyema Thoracis by Evarts A. Graham, A.B., M.D., Member of Empyema Commission, U. S. Army; Professor of Surgery, Washington University School of Medicine; Surgeon-in-Chief, Barnes Hospital and St. Louis Children's Hospital. Illustrated. Cloth, 110 Pages. Price \$2.50. C. V. Mosby Company, St. Louis

This essay was awarded the Samuel D. Gross Prize of the Philadelphia Academy of Surgery in 1920. Much of the material upon which this volume is based was acquired by personal experience during the great epidemic in our Army during the World War. It considers, in the main, principles, rather than details of treatment.

### **OBSTETRICS and PEDIATRICS**

Edited by Carroll M. Pounders, M.D.  
532 Liberty National Building, Oklahoma City

**SUN LIGHT FOR BABIES**.—Martha M. Eliot, M.D., *Child Health Bulletin*, June, 1925.

It is pointed out that treatment of disease with sunlight, known as heliotherapy, has been used to some extent for many centuries. Its value in treating tuberculosis has long been recognized.

It has recently been shown that rickets, the commonest of all diseases of infancy, can be cured by treatment with sunlight or with light from artificial sun lamps. The development of this disease can be controlled and the deformities prevented by sunlight. Rickets develops during the first weeks of life in a very large proportion of babies. Sun baths, as well as cod liver oil, must be given at this time. Window glass does not allow the active ultraviolet rays to penetrate. In Northern latitudes the sun's rays must pass obliquely through a greater depth of atmosphere before reaching the surface of the earth. This filters out much of the ultra-violet light. Sun baths in the direct sunlight constitute the simplest method of giving the baby enough ultra-violet light. These should be begun when the baby is about three or four week old. The exact date when sun baths may be started will vary with the latitude and season. The first bath should be for ten or fifteen minutes only. Each day thereafter the time of exposure should be increased from three to five minutes until the baby is directly in the sun one hour in the morning and one hour in the afternoon. The head should be protected when the baby is in the sun between ten and three o'clock. A good tan color is evidence that the ultra-violet rays are being effective.

**TREATMENT OF PERTUSSIS BY ROENTGEN RAY**.—By Lawrence W. Smith, M.D., and Associates.—*J. A. M. A.*, July 18, 1925.

The outstanding clinical and laboratory findings in eight hundred and fifty cases of pertussis treated by the Roentgen Ray are summarized. Eighty per cent of the cases showed a definite diminution in the number and severity of the paroxysms in a time interval, varying from a few hours to a week or ten days. The improvement noted in some cases was extraordinary—especially was this true of a group of infants with convulsions.

A group of approximately one hundred and fifty patients received both Roentgen Ray and vaccine. Here the degree of benefit seemed to be more marked and the duration of the paroxysmal stage seemed to be reduced more than by the Roentgen Ray treatment alone.

Almost invariably by the end of the second week, and in many instances by the end of the first week, there was noted a definite reduction in the size of the hilum lymph nodes and of the peribronchial thickening. This seemed to parallel very closely the clinical course. The authors conclude that the Roentgen Ray treatment of whooping cough seems to have passed beyond the experimental stage and that it is of value in reducing the number and severity of the paroxysms and in shortening the course of the disease.

**UNRESOLVED PNEUMONIA IN CHILDREN**.—Treatment With Roentgen Ray, Gerard N. Krost, M.D., *American Journal Disease of Children*, July, 1925.

Twelve cases were treated by the Roentgen Ray with seemingly favorable results in all except one. A brief review of the literature is presented. Experiments have shown that large doses of Roentgen Ray caused profound changes and reduced immunity by destroying lymphocytes. Small doses have been found to increase immunity in mice by stimulating lymphocytosis. The dose



given in these cases was 5 milliamperes, spark gap  $7\frac{1}{2}$  inches, distance 8 inches, filter through 3 millimeters of aluminum and four of sole leather, the time being five minutes. The exposure was made posteriorly over the area of greatest consolidation, found clinically and by localization by means of Roentgenograms. In only two cases was a second treatment given. Three cases showed fever and constipation reaction. There was no evidence of any harm in the use of the Roentgen Ray.

GOITER IN CHILDREN.—A. S. Jackson, M.D.,  
Archives of Pediatrics, June, 1925.

The writer believes the important etiologic factors in the causation of goiter in children are in the order of their importance: Iodine deficiency, excessive mental and physical exertion, heredity and focal infection. They are classified as: 1. Colloid goiter. 2. Adenoma: (a) with hyperthyroidism (toxic adenoma), (b) without hyperthyroidism (simple adenoma), (c) Iodine hyperthyroidism. 3. Exophthalmic goiter (Basedows or Graves' disease). 4. Tuberculosis, malignancy, syphilis, thyroiditis, actinomycosis, etc. The term colloid goiter is used to embrace all forms of thyroid disturbance which has been designated as physiological enlargement, adolescent goiter, simple goiter, simple parenchymatous hypertrophy, etc. The basal metabolic rate is normal.

Of the adenomas the toxic type is very rare. In the type spoken of as iodine hyperthyroidism, there is an occurrence of iodine hyperthyroidism in an adenomatous goiter. Exophthalmic goiter is not common in children.

As all forms of goiter, with the exception of the exophthalmic type, are due to deficiency of iodine, the treatment is prophylactic. The writer prefers the giving of iodine in the tablet form under the supervision of a physician or the public health authorities. For effective prophylaxis a child requires from 5 to 10 mg. of iodine a week. When colloid goiter is well started the writer believes that from 10 to 20 mg. of iodine should be given every week during the school year. The treatment must be continued till the age of 21. Throughout the goiter area it is thought that prophylactic treatment should be begun in children 10 years of age. As a further prophylactic it is believed that during pregnancy expectant mothers should be given 10 mg. of iodine a week—provided the thyroid is not adenomatous. The only indication for thyroidectomy for an adenomatous goiter in persons under 21 years of age is serious pressure symptoms or iodine hyperthyroidism.

### ORTHOPAEDIC SURGERY

Edited by Earl D. McBride, M. D.  
1006 First Nat'l Bank Bldg., Oklahoma City

**CLINICAL CASE REPORT:** Old standing deformity of the ankle, in an adult. Mrs. L. M. J. admitted to St. Anthony's Hospital on August 13, 1922, age 43, white, housewife.

**CHIEF COMPLAINT:** Pain, weakness and deformity of ankle.

**History:** Twenty-three years ago she fell and fractured her ankle. She does not know much about the injury except that she remembered that

there was some bone protruding through the flesh and the doctor said her ankle joint was dislocated. She said that it drained pus and could not be set and splinted very well on this account. She has been walking on this foot for the past twenty-three years but it has always been somewhat painful and about a year ago she sprained it so that it has been very tender and painful since then. She thinks that if she can get some kind of a brace for it she would be greatly relieved.

**EXAMINATION:** This lady is apparently in good health and weighs about 190 pounds. She walks with a marked limp favoring the left leg. We find that there is a complete ankylosis of the



### ANKYLOSIS AND SEVERE DEFORMITY OF THE ANKLE OF TWENTY-THREE YEARS STANDING—CORRECTED BY WEDGE OSTEOTOMY OF THE TIBIA AND FIBULA.

left ankle joint, but that there is motion in the tarsal joint. The foot is completely out of line with the leg, forming an angle of about 45 degrees, where it is displaced laterally inward.

**X-RAY:** The X-ray shows practically complete destruction of the astragalus and the fibula and tibia shows considerable exostosis about each malleoli.

**DISCUSSION:** The problem in this case was to obtain painless weight bearing. A brace would have to be made at such an angle that it is hardly possible to decrease the constant strain in the region of the tarsal, and ankle joint. It was thought, therefore, that if the foot could be placed in line with the leg so that there was no lateral strain about the disabled joint it would give her a good weight bearing foot without pain, even though the ankle joint was stiff.

**OPERATION:** An outline of the tibia, fibula and foot was made on heavy paper by tracing the X-Ray negative. By experiment on this outline, it was possible to ascertain the exact size of the wedge of bone which would be necessary to remove from the tibia in order to correct the deformity. An incision about five inches long was made over the front of the tibia and the proper size cuneiform osteotomy was performed. The

fibula was then fractured at the same level which permitted the opposing ends of the tibia to come together. This corrected the deformity. A plaster cast was applied to maintain position. Six weeks later good union was obtained and the deformity appeared fully corrected as shown in the above illustration. Four months later examination was made and she was found able to walk without pain and was able to do ordinary house work on a farm.

**DISCUSSION:** Deformities in adults are not always so easily corrected as this one. However, it is thought that far too many adults carry disability and deformity all of their lives, often upon the advice of the family physician that nothing can be done for them. In this case the family physician did not only discourage the patient from having an operation on her foot, but came to the hospital especially to try to discourage any such attempt at correction of her deformity.

## II. END RESULTS OF OPERATION FOR CLAW-FOOT.—Alan De Forrest Smith and Hermal L. von Lackum. *Journal American Medical Association*, February 14, 1925, p. 499.

An investigation was made of 124 cases which had been operated upon by Hibb's method. The operation consists in transferring the attachment of the extensor longus hallucis and extensor longus digitorum to a tunnel made in one or more of the tarsal bones, the plantar splinting of the toes to prevent curling up, and the envelopment of the whole in plaster-of-Paris for six weeks. Any necessary subastragaloid arthrodesis or correction of hollow foot should be done at a preliminary operation, because the traumatism is too great to be inflicted all at once. The conclusions of the authors are as follows:

1. The results of operation for transplant of the long toe extensors in case of claw-foot are very satisfactory in properly selected cases because the mechanics are sufficiently changed to prevent recurrence of the deformity.
2. The cavus deformity first must be thoroughly corrected. In cases in which this is due to bony deformity it may be corrected by resection of the mediotarsal joint, but in these the removal of bone should be sufficient to accomplish the correction without extensive division of the plantar structures.
3. Any equinus must be corrected before or at the time of the operation.
4. If any lateral instability is present a subastragaloid arthrodesis must be performed prior to the transplant.
5. No other procedure involving trauma to the foot should be combined with the transplant operation.
6. The causes of bad results were failure to splint the toes long enough, with resulting recurrences of hyperextension; tendency of the toes to curl under following the transplant; incomplete correction of cavus; drop-foot because of weakness of the anterior group, including transplanted muscles and poor lateral balance.
7. The negative effect of transplant on the toes frequently may be good, even though the transplanted muscles are too weak to have much positive effect in dorsiflexing the foot.

## III. LOOSE BODIES IN THE ANKLE JOINT.—George H. Stevenson, *British Journal of Surgery*, January, 1925, p. 611.

Foreign bodies in the ankle joint are rare. It is on this account that Stevenson reports a case occurring in a young man aged 22 years, who four years previously suffered a supposedly slight injury of the right ankle. The joint remained painful and slightly swollen. A roentgenogram showed an irregular shadow just behind the internal malleolus. The joint was opened in this region and a typical "loose body" with a bony nucleus was removed, with a similar smaller body about the size of a pea. The larger body measured approximately one by three-quarter inches.

## TUBERCULOSIS

Edited by L. J. Moorman, M.D.  
912 Medical Arts Bldg., Oklahoma City

### SOME TUBERCULOSIS "CURES" WE READ ABOUT—The Spahlinger Cure.—Esmond R. Long, Ph.D., *Journal of the Outdoor Life*, March, 1924.

This "cure", devised by M. Henri Spahlinger, a Swiss lawyer, who, however, studied medicine three years before studying law, which he never practiced, has received much publicity in England and has been given official backing by the British Red Cross.

While the exact formula of the "cure" remains a secret, it is supposedly an antitoxin composed of 22 separate and distinct toxins combined so as to form Spahlinger's "complete serum or vaccine". Spahlinger disregards the uniform failure of repeated attempts to demonstrate a toxin secreted by the tubercle bacillus by numerous bacteriologists, and insists that he has found this substance by his delicate and careful methods—methods by no means as new as he seems to think them. Opinion in England is greatly divided on the Spahlinger cure. Spahlinger, while not considered a charlatan, is on severe trial, both because he keeps his remedy a secret and because of his unscientific methods. If there is anything to his cure it will be brought out in this trial by the British Red Cross.

### SOME TUBERCULOSIS "CURES" WE READ ABOUT—The Lime Cure.—Esmond R. Long, Ph.D., *Journal of the Outdoor Life*, April, 1924.

The exuberant claims of "New Bone" or "Green-bone", a complicated mixture of chicken bones, glycerine, pepsin and dilute hydrochloric acid, are based on an entirely fallacious but not new line of reasoning. Since it is known that a calcified tubercle is full of lime and that lime excretion in tuberculosis is often excessive, the conclusion is reached that feeding lime in large amounts will heal the tubercles. As a matter of fact, there is, in any reasonable diet, five or six times the amount of lime necessary for the body's daily needs without resorting to any elaborate and expensive preparations. The body will only absorb and use its requisite amount of lime regardless of how much is supplied. If lime were going to cure tuberculosis, it would have done so long ago, since



man all his life has consumed amounts of it far in excess of his needs, and far in excess of the amount incrustated around any number of tubercles.

**GOLD CURES.**—Esmond R. Long, Ph.D., *Journal of the Outdoor Life*, February, 1925.

The various salts of gold have been used since very early times in the treatment of many diseases. For many generations gold was considered valuable in the treatment of all the ailments known to the human body, including old age.

After bacteriology came into being and the action of the mercury in syphilis began to be understood, many efforts were made, on a modern scientific basis, to find some metallic or chemical substance which would act in a similar manner on tuberculosis. Koch made use of salts of gold in this connection very early and reported his results fully at the Tenth International Medical Congress, in Berlin, August 4, 1890. He found that while the tubercle bacilli were extremely susceptible to the salts in the test tube, they were resistant to them in amounts safe to use in the living animal. Koch, becoming interested in tuberculin, did not confine his experiments with gold salts. Many others since then have experimented with gold with varying results. It is generally conceded that, in the test tube, gold compounds have a decided inhibitory effect on the growth of the tubercle bacilli.

The experiments of Professor Holger Moellgaard in the Copenhagen are perhaps the most recent and have attracted wide interest owing to the sensational newspaper publicity given them in this country which Moellgaard in no way sought. His compound, known as "Sanocrysin", has been tested by him and by a number of Danish clinicians on both animal and human subjects with favorable results. "Sanocrysin" is said to be a double salt of gold and sodium thiosulphate, which while provoking a violent reaction in tuberculous tissues is harmful to healthy tissue. This reaction is counteracted by use of a specially prepared horse serum containing small amounts of dead tubercle bacilli. This treatment is, like all so called cures for tuberculosis, on trial only at present. Owing to the nature of tuberculosis it will be many years before the results can be called conclusive.

**EYE, EAR, NOSE and THROAT**

Edited by Jas. C. Braswell, M. D.  
726 Mayo Bldg., Tulsa

**A Series of 250 Cataract Extractions by Barraquer's Method.**—R. E. Wright, *British Journal Ophth.*, 1925, IX 57.

From his experience from 250 Barraquer operations and 1,279 other operations, Wright draws the following conclusions:

The Barraquer operation is the best intracapsular operation.

It is contra-indicated in cases with a bulging eye, friable capsule, and immature cataract with a normal suspensory ligament and morgagnian cataract.

The beginner with this method is very apt to allow the cup to become engaged in the iris.

**The Early Care of Cross-Eyed Children.**—A. D. Pranagen, *Medical Clinic of North America*, 1925, VIII, 1221

In the treatment both eyes must be kept in use by covering the good eye a part of each day and thereby forcing the use of the poorer eye. For the same purpose weak atropine may be used at intervals in the good eye. In alternating strabismus these measures are unnecessary. Correction of refractive errors is also indicated. Strabismus is often immediately improved by the adjustment of proper lenses. If deviation continues after proper correction the good eye should be covered at intervals. Diffusion sense should be strengthened if possible by proper exercises under professional supervision.

**Diphtheria of the Ear.**—D. W. Drury, *Arch. Otolaryngol.*, 1925, I, 221.

The author reviews forty-four cases of diphtheria of the ear reported in the period from 1868 to 1924. According to careful observers diphtheritic forms of diffuse otitis externa are extremely rare and are never a primary condition. True diphtheria of the ear is usually due to extension of the infection from the nasopharynx. A definite diagnosis is made from a bacterial examination. The virulence of the culture is determined by animal inoculation.

The treatment of diphtheria of the ear consists in the administration of antitoxin. The prognosis is favorable provided the local and general treatment has been instituted in time.

The author reports in detail two cases of diphtheria of the ear which have come under his observation.

**INTERSTITIAL KERATITIS: Treatment, Results, and Case Reports.**—J. A. Downing, *Journal Iowa State Medical Society*, 1925, XV, 60

Ophthalmologists have been cautious in administering arsphenamine as they have feared arsenical neuritis, but because of the frequency of syphilis and its ocular manifestations, the author believes that it should be promptly employed to prevent tissue changes.

Even though it is still debatable whether arsphenamine is efficacious in the treatment of interstitial keratitis, Downing uses it in small doses frequently repeated. He also gives dionin, when necessary atropine, mercury to the limit and arsphenamine or neo-arsphenamine as an accelerator. In his twenty cases the salvarsan apparently causes rapid progression and retrogression resulting in considerable time saving and leaving less of a permanent deposit on the cornea and better resulting vision. The unaffected eye was safeguarded by a rapid increase in resistance.

**BACTERIOLOGY and PATHOLOGY**

Edited by Wm. H. Bailey, A.B. M.D.  
Wesley Hospital, Oklahoma City

**THE PARASITIC ORIGIN OF CARCINOMA.**—Dr. M. J. Scott, *Butte, Montana, Northwest Medicine*, April and May, 1925

The article is a synopsis of several articles on the subject given before various medical societies

by Dr. Scott, and a report of recent laboratory research on the subject done by Dr. Glover of New York.

The author reports that he has isolated and can consistently isolate a pleomorphic microscopic organism from carcinoma tissue. He has carried this organism in pure culture through many sub-cultures and has caused it to conform to all of Koch's postulates. He first saw this work done by Dr. Glover, then performed the experiments personally under Dr. Glover's supervision and later has repeated them many times in his own laboratory.

He describes this organism's life-cycle as comprising three stages: first, a bacillus; second, a spore or coccus-like stage; and third, the spore-sac stage, in which it resembles a blastomycete. The organism is a facultative aerobe and is Gram-positive.

His experiments of animal inoculation are reported to work out consistently, the animal dying of symptoms of malignancy and showing cancer-like lesions.

The author has been able to isolate a toxin from cultures of the organism and has obtained an anti-toxin in animals. Agglutination tests were positive in dilutions up to as high as 1-10000. He states that work is now being done to perfect a method of diagnosing cancer by one of the four methods: first, blood culture; second, complement fixation tests similar to a Wassermann reaction; third, agglutination; fourth, precipitin test. Tests for the susceptibility of patients to carcinoma, similar to the Schick test, have been done, as well as work along the line of immunization against carcinoma.

In a second paper entitled, "Arguments in favor of the Parasitic Etiology of Carcinoma," Dr. Scott discusses the various theories as to the etiology of cancer and shows arguments as to why these theories cannot be true and why the parasitic theory is the only one that fulfills all requirements and explains all characteristics of carcinoma. He then makes the statement that the Glover organism, the one which he worked, is the true and only etiological factor.

The theories that he discusses are:

1. Embryonic Rests.
2. Ribbert's Theory of isolation or cutting off of small islands of cells
3. Chronic Irritation.
4. Chemical Irritants
5. Disturbed Metabolism.
6. Changes in Internal Secretion.
7. Senile Changes of Tissues.

In his summary he relates the following facts to support his position that the Glover organism is true and only etiological factor in the formation of carcinoma: first, local origin of primary growth; second, metastasis through lymphatics from site of local origin; third, selective preference for epithelial tissue; fourth, latency; fifth, increased virulence on passing through several susceptible animals; sixth, the similarity of carcinoma clinically to tuberculosis and syphilis, both of which are germ diseases; seventh, specific clinical symptoms; eighth, more prevalent in certain localities than in others

Finally, Koch's postulates have been fulfilled in that the organism has been regularly obtained from every type of carcinoma, that it has been repeatedly grown in pure sub-cultures, that inoculation of this organism into other animals regularly causes carcinoma with metastases, and that the

organism has been again recovered in pure culture from the lesions in these animals.

An editorial in the May number of the same Journal warns us that, "Whether or not one is inclined to accept the views advanced by these investigators he is scarcely justified to condemn them off-hand." "The wise observer is open-minded, prepared to consider judiciously any alleged discovery in the realms of medical investigation, assured that \* \* \* if it presents a germ of truth, other investigators will confirm it and in due time it will become an established fact in scientific medicine."

#### NEPHROSIS, by Joseph Kaufmann, M.D., and Edward Mason, M.D., Archives of Internal Medicine.

1. The edema was massive, and one may say that an early general anasarca was the rule. All cases had effusion into the potential serous cavities.

2. Albumin in the urine was very abundant, going up to 30 gm. a liter.

3. The specific gravity was, generally speaking, high in the early stages, progressing to a low level as contraction of the kidney developed.

4. Blood was absent from the urine.

5. Urinary sediment was rich in casts, especially of the hyaline and granular variety.

6. The output of urine was small, as a rule, always less than 1500 c.c., save when powerful diuretics were used, and even then seldom exceeded 2,500 c.c. on more than one or two occasions.

7. Chlorides in the urine were low.

8. Plasma chlorides fluctuated according to the degree of anasarca present.

9. Fundi were normal in early cases, but hemorrhages and retinitis were encountered in the later stages.

10. The early cases showed a normal or low blood pressure, while the late forms showed high blood pressure.

11. All the cases had few or no objective or subjective signs of cardiac embarrassment, nor did the post mortem examination show evidence of a failing cardio vascular system.

12. Cholesterol in the blood was increased, and neutral fat was present in the ascitic fluid and urine.

13. Therapeutic results were only temporarily beneficial.

Pure forms of nephrosis were rare. Combination forms usually have a high blood pressure, albuminuric retinitis and urea retention. When the nephrosis is the important feature, we find that the specific gravity is fixed and at a higher level, and albumin is more abundant than one finds in cases of chronic nephritis or of heart disease. In the combination forms we find the edema early, and we cannot attribute it to the defective cardiac function.

#### FAMILY PHYSICIAN VS. LABORATORY DIAGNOSIS IN MALARIA.—Dr. W. T. Wootton, Hot Springs, Ark. Southern Medical Journal, February, 1925.

The author asks the question "Are we, as internist, losing the gift of making a clinical diagnosis or is it that we are less prone to express a definite opinion unless backed by confirmatory findings of a laboratory technician?" He states



that possibly because of the fact that greater advances have been made recently along the line of aids in diagnosis than in any other, we are leaning too strongly on the laboratory to the detriment of our training in clinical observation and correction.

The observation is made that even at the present time a positive or negative Wassermann is quite likely to settle the question of lues in the minds of many practitioners when the symptoms are only suggestive of recurrent or latent syphilis. Neither the history, previous treatment, nor clinical symptoms seem to have any weight against such a report.

He also points out that the patient either has or has not malaria according to the ability of the laboratory to find the organism in the blood.

Although the confirming of a clinical diagnosis is very satisfactory yet it must not be a necessity. He warns against the practice of the physician, who without any adequate examination of the patient, tells him that he has a "touch of malaria," or that, "he is bilious." Yet, he states that we must in certain conditions be willing to make a definite diagnosis on clinical evidence alone and in malaria, at least, be willing to give the patient a satisfactory therapeutic test.

Answers received to a questionnaire sent to numerous Southern physicians in regard to a clinical diagnosis of chronic malaria, and the symptoms on which such a diagnosis might be based, showed such a widely divided opinion that no deduction could be made.

In his conclusion, the author says, "Chronic malaria is an entity and in the vast majority of cases can be recognized only clinically, if at all. It must be dealt with empirically until such time as refinement in diagnostic aids are developed that will make such procedure unnecessary."

### THE SOUTHERN MEDICAL ASSOCIATION MEETING.

The various committees appointed in connection with the meeting of the Southern Medical Association in Dallas, November 9th, 192, report very satisfactory progress.

It is especially gratifying to know that the hotel committee has already succeeded in having reserved for guests more than 1600 rooms in the leading and best hotels of Dallas. This insures you that no matter how great the attendance, each one will be comfortably and suitably provided with proper hotel accommodations. This settles a question which has not concerned the doctors of Dallas who are acquainted with local facilities, but which has been raised by prospective visitors.

For the first time in its history, the Association will have all its activities housed in one building. The new educational building of the First Baptist Church on the corner of St. Paul and Jacinto streets will be completed long before November and will have a sufficient number of assembly halls for the various section meetings. The large auditorium with its splendid acoustics gives ample room for all sessions and the basement floor, easily accessible, will give more than enough room for all exhibits, commercial and scientific.

In connection with the Association's meeting in November, clinics in all branches will be conducted in all Dallas' splendid hospitals, which con-

tribute largely to its rank as a medical center of the Southwest. The bed capacity in the larger hospitals alone is in excess of 1,200. Over \$8,000,000.00 has been invested in the hospital facilities.

### Medical Arts Building.

The story of Dallas as a medical center would not be complete without some mention of this 19 story skyscraper, completed in 1924 at a cost of \$1,500,000. It was designated for and is occupied by the medical and dental professions. It is of Gothic Cross design, assuring both light and ventilation to every office. At the time the building was erected it was the tallest monolithic concrete building in the world. About 60,000 patients visit this building every month.

The Medical Profession of Dallas and of Texas warmly invites the Southern doctor and his wife to visit Dallas on November 9th, 1925.

CURTIS ROSSER, M.D.,  
For the Publicity Committee.

### COOL MORNING BATH IS RIGHT START FOR DAY.

The cold or cool bath or shower taken in a warm room every morning is a worth-while practice. If you are just starting the cold morning bath habit, take a bath towel, wring it out of cold water and rub the body briskly with it.

This will pave the way for the shower of cold water. If the body does not react with a warm glow about one or two minutes after the cold sponge and rub down, you are probably not physically suited for a cold shower. You should then take a warm shower for a few moments, and follow this by a short cold shower and vigorous rubbing with a course bath towel.

If taken every day, the cold bath or shower will help to make the skin active and healthy. Some physicians recommend it also for keeping the skin toned up to ward off colds.

The cold morning shower is healthful but it is not sufficient to keep the body clean. Every one should take at least three warm baths a week, and fastidious persons will enjoy one each day, especially in hot weather.

The best time to take the warm cleansing bath is just before retiring, as it relaxes the muscles and nerves and induces sleep. Use plenty of warm water and pure soap. The water should be about 95 of 97 degrees F.—Hygeia.

### PHYSIOTHERAPEUTIC CONVENTION

Physicians are invited to attend the Fourth Annual Physiotherapeutic Convention to be held at the Drake Hotel, Chicago, October 12 to 16, 1925. Papers will be read and discussed by leading physicians of national and international reputation in this field. Demonstrations and exhibits of the latest apparatus and methods employed in physiotherapy will be given. Physicians who are in good standing with their State Medical Association and can give evidence of that fact are invited. Reservations may be made and programs obtained by addressing the Educational Department of H. G. Fisher & Company, 2335 Wabansia Ave., Chicago, Illinois.

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NOTE—Corrections and additions to the above list will be cheerfully accepted.

## *The Selection of a Physician—*

The selection of a physician for an operation or as a family doctor, is usually made with some care. We consult those who have employed physicians and are governed largely by their recommendations. But having selected a physician, we follow his advice. We trust him even to the extent of submitting to operations that may have serious results.

The point is, we trust THE MAN WHO KNOWS.

Now, doctor, the institutions and the firms advertised in this Journal were carefully investigated before their announcements were printed here. The medical products were submitted to laboratory tests, before they were accepted by the Council on Pharmacy and Chemistry.

On the same principle that patients trust you about matters with which you are informed, so your publishers urge you to trust their judgment and buy goods from the advertisers who are admitted to these pages. Other considerations being equal, you should give your advertiser PREFERENCE because you know they are believed to be trustworthy. Don't speculate or experiment! Trust the APPROVED firms and goods!



### WOMEN MORE EASILY UPSET OVER TRIFLES.

While men and women react differently to the realities of life, and while both are afflicted with nerves, there is no doubt that women are more profoundly affected in the long run. Their nerves get out of tune more readily.

Countless reasons exist for this physiological fact. Woman's organism is such that she gives way more quickly to tension, in the strain and stress of existence. While she can endure physical and mental pain more stoically and rise heroically to great calamities, she permits the little pin-pricks of daily life to upset her equilibrium and poise more than does man.—Hygeia.

### SAYS FREAK DIETS AND FASTING ARE INJURIOUS.

Don't start to reduce by living on orange juice or buttermilk or some similar faddish diet. The best thing to do is to consult a doctor who will work out, or have a dietitian prepare under his direction, a diet suitable for your case.

This is the advice that Dr. Lydia Allen DeVilbiss, hygiene professor and popular lecturer, gives to Hygeia readers who are longing for a girlish figure. Dr. DeVilbiss cut her own weight down 50 pounds to normal by diet and exercise.

"Persons who go on freakish diets may not notice any bad results at the time," Dr. DeVilbiss writes, "but years afterwards their heart muscles and other internal structures are likely to show the result of running the body engine without proper food and lubrication."

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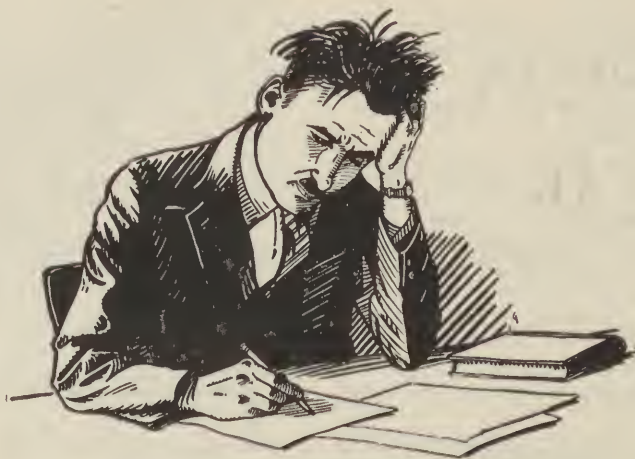
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# THE JOURNAL

OF THE  
OKLAHOMA STATE MEDICAL ASSOCIATION

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MUSKOGEE, OKLA., OCTOBER, 1925

NUMBER 10

## THE TREATMENT OF PULMONARY TUBERCULOSIS BY INTRAVENOUS INJECTIONS OF MERCUROCHROME\*

BASIL A. HAYES, A.B., M.D.  
OKLAHOMA CITY

In a recent paper the writer has described the beneficial effects of intravenous injections of mercurochrome on a series of twenty-one cases of Pulmonary Tuberculosis. Today it is his pleasure to report further cases and to elaborate somewhat on this plan of treatment.

Dr. Lydia DeWitt of Chicago, described in 1920 an extensive series of experiments on guinea pigs in which she tested the relative merits of many synthetic compounds of mercury, including mercurochrome, which was then quite new. Her method was to give the drugs hypodermically, and she found that tuberculous pigs treated in this manner lived longer than those not treated. She further found that a dilution of one to twenty thousand mercurochrome inhibited completely the growth of tubercle bacilli.

So far as available literature reveals the matter was dropped at that point. During the last two years, however, medical magazines and pamphlets have been full of reports of treatment of all sorts of blood infections by intravenous injections of mercurochrome. Some have been successful, others have not been.

Last year, Dr. John A. Roddy of Oklahoma City read a paper before the Clinical Society of Saint Anthony's Hospital, describing the treatment of fifteen cases of acute infections in this manner, and at the time the autopsy of an injected rabbit was shown which has been prepared by Dr. Ralph E. Myers of Saint Anthony's Clinical Laboratory. Dr. Myers called attention to the extreme staining of all the more vascular organs, especially the lungs,

and suggested that it might be of value in the treatment of lung infections.

About that time, reports came from eastern schools of success in the treatment of pneumonia by this method. In October, the writer was in Baltimore and inquired of Dr. Hugh Young and Dr. J. A. C. Colston, whether or not, in their opinion, there would be any contraindication to usage of mercurochrome intravenously for Pulmonary Tuberculosis. They frankly stated that that they did not know but could see no reason why it would be harmful. Previous to this the matter had been mentioned to Drs. Lea A. Riley, L. J. Moorman and A. K. West of Oklahoma City, none of whom saw any contraindication to its cautious use. In January of this year, two cases were started on small doses and the results were so prompt and striking that other cases were given it as fast as possible.

### TECHNIQUE AND DOSAGE.

Fresh one per cent. mercurochrome is made up by dissolving a five-grain capsule of the crystals in one ounce of sterile distilled water or normal saline solution. After standing a sort of scum of fibrous material rises to the surface, and it is best to strain the solution through sterile gauze or cotton before injecting it. The writer's practice has been to make it fresh each day in order that no adverse effects may arise from deterioration.

The doses are administered in the veins of the arm exactly as any other intravenous medication and are given preferably in the forenoon so as to allow the reaction to pass off before night. Meals have not been omitted and unless large doses are given there is no gastric disturbance. As a general rule, the first dose causes the strongest reaction. After that, the reaction may be disregarded.

When this work was started, two patients were chosen as representing different types of cases and were given 5 cc. each. One was a man of thirty who had been sick for four or five years and who

\* Read before the Section on General Medicine, Neurology, Pathology and Bacteriology, Annual Meeting, Oklahoma State Medical Association, Tulsa, May 12, 13, 14, 1925.

had multiple cavities in the left lung and extensive infiltration in the right. He was running a daily temperature of 99.6 and was so sick he could hardly go from bed to bathroom, a distance of fifteen feet. Thirty minutes after his injection he had a hard chill and his fever went up two degrees for several hours. But by night the fever had dropped and he slept well for the first time in twelve months and he did not cough again for forty-eight hours.

The other patient was a young woman of twenty who had an extensive infiltration in the right lung. She had progressively lost for a year in spite of being kept constantly in bed. The only reaction she suffered was a rise of temperature and she also was relieved of coughing almost entirely for the next two days.

Encouraged by these results, the dose of these two patients was increased to 10 cc. daily; another was given 15 cc. twice weekly; still another was given 5 cc. every other day. It was soon found that the 15 cc. dose caused a severe reaction and after the fourth or fifth dose some soreness of the gums developed.

The two patients receiving 10 cc. every day had no further reaction than a steady rise of temperature of one or two degrees and after two weeks they also began to have tender gums. The patient who was given 5 cc. every other day had no reaction; yet received all the beneficial effects the other had. Finally, nearly all the patients were placed on 5 cc. doses twice weekly. Even this amount will cause intestinal cramps in some and it is best to start on 2 cc. or 3 cc. doses every two or three days, noting the effect carefully. The ideal thing, in the writer's judgment, is to give just enough to relieve the symptoms without producing an appreciable rise of temperature; and when it is handled in this manner the temperature will frequently be lowered.

#### TYPES OF CASES.

In all the writer has treated thirty-five cases of Pulmonary Tuberculosis by intravenous injections of mercurochrome. Twenty-seven of these were far advanced; six were moderately advanced and two were diagnosed as incipient; i. e., were suffering from fever, loss of weight and strength but had no demonstrable physical signs. One of these who had a history of exposure over a long period of time, improved rapidly under rest and mercurochrome and has now been discharged from

the hospital. Five cc. doses of mercurochrome did not cause any reaction in her case.

The other had no history of exposure and did not improve under rest or mercurochrome and an X-ray of her chest revealed no shadows which could be interpreted as tuberculous lesions; hence the diagnosis is doubtful. The interesting thing about her case is that while she showed no improvement at the time she was taking mercurochrome, she now, after a lapse of a month, shows quite a marked improvement.

Of the moderately advanced cases; one has been discharged and is now at home; one is working about the hospital; three are allowed out of bed for meals and bath and have no fever. The sixth one has been under treatment only two weeks, but already sleeps well, eats well and has normal temperature the greater part of the time. Of the twenty-seven advanced cases, six have died. Two are about to die and are simply given injections occasionally to keep them comfortable. Two are no better—probably worse. One is a colored girl and the other has been in the hospital only a month and has lost weight steadily. She has a massive infiltration of the upper half of each lung with no cavities that can be demonstrated. The remaining seventeen patients are all improved.

#### EFFECTS.

The immediate effect of mercurochrome is a slight rise of temperature accompanied by headache and more or less pain in chest. This lasts several hours and is succeeded by a pronounced feeling of well being and a drop in temperature—frequently below normal. Along with this, the following phenomena are noted:

1. Improvement of cough.
2. Lessening of expectoration.
3. Stimulation of appetite.
4. Improvement in sleep and nerve tone.
5. Relief of weakness and dyspnea.
6. Gain in weight.
7. Change in physical signs.
8. Relief of pleuritic pain.

In the majority of cases the relief from coughing has been quite marked and constant. Patients who were kept awake through the night now sleep all night without disturbance. Patients who formerly



coughed for one or two hours in the early morning now cough one or two minutes. Patients who formerly coughed every hour or two during the day, now virtually do not cough at all. Two cases have entirely ceased to cough since being placed under treatment. One or two cases have apparently coughed more for the first few days but there was a change, in that the cough was dry and after the lapse of a week it was much diminished. Even in those cases where the relief from coughing has not been so marked, there has been a prompt reduction in the amount of sputum. Patients who expectorated 6 or 8 ounces before treatment now expectorate barely an ounce. Several expectorate only enough to cover the bottom of a sputum cup. Three have stopped expectorating entirely. The change in sputum consists of a lessening of the caseous elements and a drying up of the serous part, leaving only a thick mucopurulent material.

The advanced cases have nearly all been troubled by an inability to eat. This was due partially to a lack of appetite and partially to inability to digest food that was eaten. Without a single exception, every patient who has been given mercurochrome has gained in appetite and in digestive power. Even the patients who were subject to indigestion have had less trouble than formerly.

Another good effect of the drug has been the promotion of sleep and lessening of nervousness. Perhaps other men are more fortunate than the writer in the class of patients that come to them but the problem of dealing with irritable sleepless sufferers has been a perplexing one. Bromides, veronal and codeine have been, in the past, the chief aids but since mercurochrome has been used, this problem has virtually disappeared. These patients sleep like healthy people and many of them say that they are sleeping in daytime for the first time since they became ill. Nervous despondent spells are not nearly so numerous as before. This, of course, can be explained by the fact that the patients feel that something active is being done for them, but the principal thing is that they feel so much better than before.

The weakness and dyspnea common to advanced cases are likewise improved. The various little aches and tender spots felt by toxic febrile patients soon disappear and the relief in breathing is quite noticeable. One patient who was unable to do more than get out of bed and walk to the

bathroom is now able to walk half a mile without distress or increase of temperature. Dyspnea is relieved to the extent that it is no longer noticeable in patients who formerly could not converse without shortness of breath.

In his first report, the writer showed that nearly every case up to that time had gained in weight or had remained the same. Of thirty-five cases now treated, records are not available in thirteen cases because they were treated in homes or else were too sick to weigh. Of the twenty-two remaining, fifteen have gained in weight, four have remained the same and three have lost weight. The three who have lost weight are as follows:

First, one far advanced case who has a massive infiltration of both upper halves and who has been in the hospital only a month; second, two cases of old chronics who have suffered recent, acute respiratory and gastric upsets and who will not stay in bed. They feel good in every way. One of them had a severe rhinitis, sore-throat, temperature and cough for a week; the other had a sudden acute rise of temperature to 104 degrees and coughed out a large amount of pus as if an abscess had ruptured. Following this, he developed a diarrhea for two or three days. Since then both have started to improve again, and the writer's opinion is that their loss was due to the intercurrent complication.

The temperature in most cases has been slightly higher at first but has gradually lowered to a point at or below what it was before treatment. Several cases are now having no temperature except 99 degrees one time during the afternoon or evening. Two cases have normal temperature most of the time, whereas, at the beginning they were having 101 degrees in the afternoon. One case has more fever now than she had before treatment but she was the victim of an acute respiratory infection which attacked her during the third week of her treatment and caused a temperature of 103 for a week or more.

Pleuritic pains have been effectively relieved by this treatment. The pain of tuberculosis laryngitis has not been relieved in one case though the voice tones appeared slightly improved for a time after a complete aphonia of several months standing. Local applications to the interior of the larynx have not been used. The pain of a tuberculous hip joint was relieved at first but later reappeared.

The color and texture of the skin in these patients has been uniformly improved; becoming clear and pink. The facial expression has become brighter and more rested. The improvement in skin is so noticeable that some of the nurses have requested that it be given to them in the hope of attaining similar cosmetic benefit.

There has been no marked change in physical signs in these patients. The observation and interpretation of physical signs is subject to such a large amount of personal variation that the writer feels that unless there were a complete disappearance of signs, it is practically impossible to be very accurate in comparing the amount, kind and quality of dullness, rales, or bronchial breathing of one time with another. This being the case, the only thing that can be definitely said, is that there is a noticeable lessening of dyspnea and of rattling, wheezing noises. Expansion in the majority of cases appears to be better, particularly, where one side was restricted. On auscultation, there has been a lessening of the larger rales; and in one case, which has been rather closely studied, there is no doubt but that there is considerably less evidence of moisture than before treatment. Beyond this, no change can be reported.

#### DEATHS.

Of thirty-five cases, six have died, after being placed on this treatment. Two of these died of a severe caseous pneumonia, one died of weakness following an intestinal hemorrhage, one died of exhaustion following an attack of diarrhea and two died of asthenia and sepsis.

All of these cases were rendered temporarily more comfortable, though mercurochrome may have started a diarrhea in one case which ended in death. The patient was already in extremis, having a tuberculos peritonitis, with abdomen full of fluid and edematous extremities. She was coughing constantly and was given 4 cc. of mercurochrome (one per cent) in the hope of relieving this. On the following day she was much better. That afternoon she developed a mild diarrhea and had a dozen stools during the afternoon and night. The diarrhea ceased and her cough, which had been temporarily relieved, returned. During the following day and night she coughed incessantly in spite of ordinary remedies. Mercurochrome was withheld on account of the

danger of starting another diarrhea. The next day the cough ceased and did not return. The patient appeared drowsy and complained of weakness. She gradually sank into a stupor and died as one falling asleep.

#### CONTRAINDICATIONS.

Used in small enough doses, there apparently is no contraindication. Where a patient is extremely weak, no drug should be given which might start a diarrhea or chill, hence, it should not be used except in very small doses, such as 2 cc. of one per cent solution. Where there is a tendency to have higher temperature without compensating benefits, it should be discontinued. The use of this drug is more or less similar to Tuberculin, and each case must be watched carefully, gradually increasing the dose to a point where maximum benefits are received without ill effects.

#### LABORATORY REPORTS.

Repeated blood counts and urinalysis have shown no harmful results to the patient in any way. X-ray pictures by Dr. J. E. Heatly of University Hospital of three cases have shown nothing except a slight lessening of the amount of infiltration. It was sixty days before the change could be detected, however. Other cases are being studied as the opportunity arises. Examination of sputum taken on ten consecutive days shows no definite lessening of the number of organism per microscopic field. Injection of the peritoneal cavity of guinea pigs with positive sputum which had been allowed to stand in blood serum drawn from the vein of patients thirty minutes after receiving doses of mercurochrome has shown nothing conclusive as yet. Thirty days after injection, both these pigs and the controls show a gain in weight, therefore, have not been autopsied. This work was kindly done by Miss Outhier of University Hospital laboratory. During the next few months considerable work along this line will be done.

#### CONCLUSION.

The writer has no desire to overstate the beneficial effects of mercurochrome or to minimize its dangers. His sole purpose in this paper is to present such facts and observations as have come to his notice, hoping that in the near future a truly scientific appraisal of its value may be made. At present it is impossible to explain absolutely its action or to say whether it permanently benefits or not;



but as long as moderate doses apparently cause no injury to patients and do relieve every symptom, the rational thing to do is to use it.

Observations, thus far, show that it relieves cough, diminishes expectoration, stimulates appetite, improves sleep and nerve tone, relieves weakness, dyspnea and pain, and causes a gain in weight.

A study of physical signs and X-ray pictures in a few cases show no marked change but does show improvement. The only contraindication thus far discovered is diarrhea. In the experience of the writer, it is safe to start any patient on doses as small as 2 cc. of one per cent solution.

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Since the reading of this paper, an article by Dr. Hugh Young and associates has appeared in the Archives of Surgery, in which he reports three cases of pulmonary tuberculosis having been treated by Dr. Wolff of Opelousas, Louisiana, by injections of mercurochrome, with identical results to those set forth in this article.

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*Discussion:* Dr. C. J. Fishman, Oklahoma City.

Ever since the day of Hippocrates tuberculosis has been known, its prognosis definitely understood, and the attempts at treatment repeatedly brought out with the idea of a cure. Up to this time very little definite progress has been made except in the fundamental principles of management, which are definitely known and understood by everyone of us.

Periodically a new cure for tuberculosis is propounded and brought forth resulting in a state of expectancy and then dire disappointment. Even during my youthful experience, I have gone through several such periods of excitement. While I was away during the month of March, Dr. Hayes read his first paper at Oklahoma City, and I was soon informed of the furor which he created by its presentation. Personally, however, I did not get very much enthused, although I had hoped that one of our colleagues might develop something that was new and startling in medicine. I did not get too much excited because I had gone through several periods of enthusiasm, even during my relatively few years of practice.

Koch, the immortal genius of science, the clinician of great insight and vast experience, the conservative worker and thinker, made the mistake of presenting before the world a cure for tuberculosis, in his Koch's Tuberculin, before it had been thoroughly tried out. It was only a few years, in jus-

tice to himself, before he refuted his original statements and much chagrined at his haste in presentation.

When I was in Berlin in 1912 Friedman read a paper before the Medical Society pointing out that attenuated tubercle bacilli, passed through cold-blooded animals such as turtles, would have a beneficial effect, and cure cases of Pulmonary Tuberculosis. When I returned to America in 1913 Carl von Rucks of Ashville, North Carolina, had a different method of preparing the tubercle bacilli, so that the von Rucks treatment was considered a step in advance in the use of Tuberculin. However, this did not prove to be true; and more recently, I understand, Thompson recommended a method of management which would surely cure tuberculosis, and that is a failure.

Even I myself, in 1911, conceived the idea that if the symptoms of late tuberculosis were caused by organism of secondary infection, why would it not be possible to overcome the secondary infection by massive vaccine treatment, and then to cure the original tuberculosis by the orthodox method then known. I was very much enthused until I came to think seriously about this condition, and realized that tubercle bacilli had already destroyed a good deal of the tissue, and was in the way of destroying more, in spite of the presence or absence of secondary infection.

We are now passing through a period of experimentation whereby chemo-therapeutic measures are being tried, and justly so, to cure specific infection. I sincerely believe that this is the field of greatest endeavor and service to humanity, because it may be possible that some drug may be discovered which will be a specific in its effect upon tubercle bacilli, or staphylococcus or streptococcus, as the arsenical preparations are against the spirocheta pallida. This field of endeavor is open to us, and it is worth while to experiment along these lines. Therefore, Dr. Hayes is to be commended for his attempts at working out the problem of the effect of Mercurochrome upon tubercular infection. This is a field of vast endeavor, and should be continued.

If we analyze the results of Dr. Hayes' report, we must admit that there has been some improvement upon the symptomatology of his cases. As far as his ultimate results are concerned, however, we must remember his statement that he had six

deaths out of 35 cases, in the course of two months. That would mean six times that many deaths in the course of 12 months, which would be some considerable mortality.

He also stated in his paper that the psychology of the effect of the use of this preparation upon the patients is apparently important, since they realize that something is being done for them which had not been done before. Moreover, he points out that the effect is similar to the effect of Tuberculin, and I believe that that is quite true. It is not specific, it is not strictly chemo-therapeutic, and therefore the conclusions should not be presented prematurely.

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### DIAGNOSIS OF TUBERCULOSIS IN EARLY LIFE\*

WILLIAM M. TAYLOR, M.D.  
OKLAHOMA CITY.

Tubercular infection is frequent in early life and most difficult of early diagnosis, so it behooves us that every effort be made for its early detection, and it is with this phase of this subject that this paper more particularly deals.

No age, nor is any tissue of the organism exempt from invasion of the tubercular bacillus, and it is with this idea of stressing the benefit derived from careful history taking and X-ray pictures that this paper is presented, and the data on which our conclusions are based are furnished by a series of X-ray chest pictures made at the Oklahoma City Tubercular Dispensary.

Moorman's observation that we consider the peculiar tendency of lymph nodes to gather tubercular bacilli and then give attention to the strategic location of the tracheobronchial glands, it is not difficult to understand why they are so frequently involved. The consensus of opinion seems to be that tubercular infection in early life is essentially glandular, whether tracheobronchial, abdominal, cervical, or elsewhere.

This data gathered at the dispensary, while valuable in its bearing on the diagnosis of tuberculosis in early life, also shows the relationship of direct exposure

and X-ray manifestation in the chest of the patient coming to the dispensary for complete examination. To increase the value of these pictures, it is necessary that repeated X-rays be made from time to time, because the shadows produced by enlarged tracheobronchial glands may be produced by other conditions, such as influenza, following measles, and acute catarrhal bronchitis, etc., or any other acute respiratory infections, thus leading to confusion. These shadows are more transitory in these named affections than in tuberculous adenitis.

X-ray of chest is most valuable when taken into consideration with our other diagnostic evidence. Carefully taken histories are most important, particularly regarding exposures—direct or indirect.

When the following general symptoms are not accounted for by some definite cause the possibility of tuberculosis should be considered, namely:

Daily elevation of temperature.

Loss of weight or failure to gain.

Secondary anemia.

Anorexia.

Easily produced fatigue.

Dry non-productive cough, often of the pertussoid type.

However, the general appearance may not in every instance suggest tuberculosis. Often we see children of normal weight, good color, apparently healthy, but who perhaps tire easily and on examination of chest the X-ray shows a strong suspicion of tuberculosis.

Physical signs may be, and are often lacking in the early stages. d'Espines sign and interscapular dullness are valuable signs when found. No other sign may be found until there is active involvement of the pulmonary tissue with cough and rales over the involved area.

The skin test of von Pirquet's is valuable and perhaps we would do well to employ it in all cases. No examination of the chest of known direct or indirect exposure is complete without a roentgenogram. By data obtained in this series of pictures made at the dispensary, we think some very valuable aid has been afforded. Very striking is the relation between known exposures and the density of the shadows in the pictures as will be pointed out. The pictures of the chest in this series was

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valuable not only in establishing a diagnosis but in determining the degree of involvement.

The density and extent of the hilum and peribronchial shadows and the number and size of calcified nodules were interpreted as determining the degree of infection and were classified as heavy, moderate, and light. (See chart—Taylor and Moorman, Southern Medical Journal, September, 1922).

1. By direct contact is meant the daily association of the individual with an open case of tuberculosis.

2. By contact with a suspected case is meant association with one who bears certain marks of tuberculosis, but in whom the diagnosis has not been determined by the finding of tubercular bacilli in the sputum.

To summarize we have 223 children under 14 years of age. One hundred and nineteen gave a history of direct contact. Of these, 64, or 53.8 per cent showed heavy infection; 43, or 36.2 per cent showed moderate infection; 12, or 10.8 per cent showed light infection. Of the total number, 57 were exposed to suspected cases; 24, or 42.1 per cent of these were heavy; 22, or 38.5 per cent were moderate; and 11, or 19.4 per cent were light. Forty-seven of the total number gave no history of exposure; 20, or 42.5 per cent of these were heavy; 15, or 31.9 per cent were moderate; and 12, or 25.5 per cent were light.

While every means suggested should be assiduously pursued we do see in early life tuberculous infections which develop with so few premonitory symptoms and run so rapid a course that even a possibility of early diagnosis is denied us.

Mothers with advanced tuberculosis give birth to infants with prenatal infection. A case showing this manifestation came recently under my observation and went to autopsy. Briefly, the history and autopsy findings were as follows:

St. Anthony's Hospital, Oklahoma City, Oklahoma.

Baby Hutsell born December 5th, 1923, full term, 7 pounds. Not put to the breast due to the fact that mother had been actively tubercular, dying two weeks after confinement from acute tuberculous pneumonia. When seventeen days old, infant developed high temperature, lasting until time of death, January 18th. Lost weight and grew worse rapidly. The physical examination was negative, until four days

before death, when rales were heard over both bases and evidence of meningeal irritation seen. January 17th, baby became worse, developed temperature of 106, became cyanosed, respiration very rapid, convulsive seizure. Died January 18th—23 days after birth. Autopsy report showed miliary tuberculosis. Both lungs were covered with minute areas, about the size of a millet seed. Slight consolidation of both lungs posteriorly. Firm nodular areas about the size of a match head, extending along the entire testinal tract. The liver enlarged, pale, studded with many grayish-white millet-seed size areas. Cut surface showed similar areas in liver. Spleen showed same pathology. Kidney showed many areas as above described. Mesenteric lymph nodes palpable, size of a pea to the size of a dime. Specimen sent to Pierce Laboratories were reported tubercles. We take this to be a case of prenatal infection, not inherited tuberculosis in the ordinary acceptance of that term.

Through courtesy of Dr. Moorman, our private cases, and in the pediatric service at the Oklahoma University Hospital, we have had under our observation, five cases of tubercular meningitis during the past two years, all under one and one-half years of age. In looking over records of these cases, we find for the most part very few premonitory symptoms, when as a matter of fact, practically all tuberculous meningitis is secondary to some tuberculous process elsewhere in the body. Here again we are impressed with the importance of careful history taking for we find in these five cases that three infants came in contact with the actively tubercular father; one, with a tubercular mother, and one other exposure unknown. Thus we see that it is often impossible to make an early diagnosis in such cases as these because of the abrupt onset and rapid course run. Such is not the case in older children, as we have attempted to show above.

To briefly summarize:

1. We have attempted to show that no age is exempt, even a pre-natal is possible from a tubercular mother. (Abt's Pediatrics).

2. Noting the much more manifest shadowing of the holum and calcified nodules in cases giving history of direct exposure leads one to feel more justified in the dependence placed in the X-ray of chest.

3. By repeated X-rays of the chest we are aided in differentiating between tu-

berculous adenitis and the more transitory form seen following acute respiratory infections.

4. We believe the X-rays of chest are always more valuable when taken into account with other findings.

The three most significant points in diagnosis are:

1. Positive von Pirquet.
2. History of direct exposure.
3. X-ray of chest. To be more conclusive the picture of chest should be repeated from time to time for it is by the follow up pictures and watching the general condition of the child that he may be safeguarded by way of improving environment and the early detection of any suspicious symptoms. The interpretation of a competent and experienced roentgenologist are of much value.

#### THE VALUE OF ARTIFICIAL PNEUMOTHORAX IN THE TREATMENT OF PULMONARY CONDITIONS\*

L. J. MOORMAN, M. D.  
OKLAHOMA CITY

Artificial pneumothorax finds its chief application in the treatment of pulmonary tuberculosis. This disease presents many problems which are difficult of solution. It is impossible to lay down definite, clear-cut standards for diagnosis, prognosis and treatment. This is particularly true of artificial pneumothorax. Since the introduction of the manometer more than a decade ago, thousands of cases have been treated by competent observers. Accurate records have been kept, but in spite of accumulated data we continue to have divergent opinions as to the value of this procedure, its indications and contra-indications. However, a reasonable familiarity with the treatment of tuberculosis will cause anyone to accept, with enthusiasm, Rivieres statement that "No more hopeful ray of sunshine has ever come to illumine the dark kingdom of disease, than that introduced into the path of the consumptive through the discovery of artificial pneumothorax."

Indications and contra-indications are dependent, very largely, upon individual judgment. It is generally agreed that artificial pneumothorax should not be em-

ployed if the patient still has a good chance to recover without it. In rare cases where it is impossible to pursue the routine management because of the necessity of making a living, the earning capacity may be maintained and the course of the disease rendered more favorable by means of this procedure. Pneumothorax is particularly indicated in so-called unilateral advanced cases. Even though there is demonstrable trouble on both sides, artificial pneumothorax is not contra-indicated if it is possible to determine which side is contributing the greater burden in the form of toxemia. Artificial pneumothorax is indicated in any case of pulmonary tuberculosis where the accepted routine methods have failed to bring about improvement, provided it is possible to show that the disease is more advanced and more active on one side than on the other. It is also indicated in persistent or repeated pulmonary hemorrhages not controlled by other methods. Pleurisy with effusion of tuberculous origin may be advantageously treated by drawing off the fluid and introducing air. Other conditions in which artificial pneumothorax is indicated are certain cases of pulmonary abscess and bronchiectasis.

The dangers are pleural shock and air embolism, but with the present technic these are rare. Pleural effusion is not uncommon, and chest wall sinuses may occur. Extension of the disease in the untreated lung may become a serious complication, but in our experience disease already present in the untreated lung is much more apt to improve when the free absorption of toxins is retarded by compression of the side showing the greater amount of active trouble. Spontaneous pneumothorax during the course of compression may become a serious complication. Compression is often rendered incomplete because of pleural adhesions and in some cases the pleural space is completely obliterated and all attempts to introduce the needle are futile.

Since May, 1917, we have treated sixty-six cases by means of artificial pneumothorax. We failed to find the pleural space in ten cases, making a total of seventy-six. Seventeen of the sixty-six cases treated received the initial filling before coming under our observation. Of the forty-nine remaining cases, forty were compressed because of advanced pulmonary tuberculosis. Eight because of progressive moderately advanced tuberculosis. One moderately advanced case was compressed be-

\* Read before the Section on General Medicine, Neurology, Pathology and Bacteriology, Annual Meeting, Oklahoma State Medical Association, Tulsa, May 12, 13, 14, 1925.



cause it was necessary for the patient to continue work, and routine management could not be tried. With this exception all the above cases had been on sanatorium management and had failed to improve, or had grown worse while under treatment. In eleven of the cases pulmonary hemorrhage influenced the decision in favor of compression. In two cases, while compression was under consideration, spontaneous pneumothorax occurred. Both suffered considerable shock and developed fluid. After a few days the fluid was withdrawn and air introduced. This procedure has been repeated from time to time with very satisfactory results. In one case compression was employed because of distressing unilateral bronchiectasis. In two of the cases compressed before coming under our observation the reason for compression was pulmonary abscess. In one of these the abscess healed and the patient has been restored to full earning capacity. In the other the abscess was unfavorably located, giving rise to pleural adhesions, which prevented effective compression. Surgical drainage was advised but the patient decided in favor of Arizona, where he died a few weeks later.

In the course of treatment 18 per cent of the cases developed fluid, 7 per cent had pulmonary hemorrhage, 4 per cent had sinuses of the chest wall, 7 per cent developed spontaneous pneumothorax, and 13 per cent have died. An analysis of the nine deaths shows that in two of the cases it was impossible to introduce more than 200 cc. of air because of adhesions; this small space was gradually lost in each case and death resulted because of advancing disease in both lungs. Two of the cases were acute pneumonic in character and were compressed with little hope of favorably influencing the course of the disease. One case had shown marked improvement when she had a fall which was followed by rapidly progressing activity in the uncompressed lung, ultimately causing death in spite of the fact that compression was discontinued. One of the deaths occurred suddenly, presumably from pleural shock. Details are wanting in this case because the patient had gone to New Mexico to continue her treatment. One followed spontaneous pneumothorax in a very advanced case with large cavities. This was an extremely toxic case which had shown marked improvement after a few fillings. One was an acute pneumonic, hemorrhage case in which partial compression followed spontaneous pneumothorax. This com-

pression was maintained by the introduction of small quantities of air from time to time, because it lessened pleural pain and the harrassing cough. Pulmonary abscess in which compression had failed because of pleural adhesions was the cause of death in one case. Of the fifty-seven remaining cases, eleven, or 17 per cent, have passed from our supervision. With one exception all were improving, several having been restored to partial earning capacity and one was drawing full salary.

It must be understood that statistics with reference to pneumothorax are rather unsatisfactory as ultimate results can be determined only after years of observation. In reporting the forty-six cases now under supervision, it is only fair to state that more than 60 per cent have been under treatment two years or longer, while only 20 per cent have been under treatment less than one year. While it is difficult to tabulate results, we feel the following figures furnish a fair estimate. Restoration of full earning capacity, 20 per cent; fifty per cent earning capacity, 26 per cent; twenty-five per cent earning capacity, 22 per cent. Improved but not able to take up any work, 22 per cent; not improved, 10 per cent. In the four cases listed as not improved, three had shown marked improvement before the development of the following unfortunate circumstances: Pregnancy in one, over-exertion in another, and an attempt to give up compression, against advice, in the third. Compression was given up in four cases because of gradual loss of space, in one because of progressive trouble in the uncompressed lung, and in another because of influenzal bronchopneumonia with empyema on the compressed side. After a long desperate struggle this patient recovered and continues to do well.

Artificial pneumothorax in well chosen cases is of great value to the patient in that it may brace a lagging spirit; prove to be an immediate life saver in case of hemorrhage or extreme toxemia; relieve distressing symptoms; prolong life; restore earning capacity, and even prove to be the determining factor in the arrestment of some cases. Its social aspect is significant in that it improves the mental status of patients and family and thereby favorably influences environment. It reduces the amount of sputum and often causes the tubercle bacilli to disappear, thus securing a greater degree of safety for those who come in contact with the patient.

## RENAL TUBERCULOSIS\*

J. W. ROGERS, M.D.

TULSA

Tuberculosis of the kidney may be acute as in a general miliary tuberculosis in which both kidneys are involved at the same time. There also occurs a tubercular nephritis but usually when we speak of tuberculosis of the kidney we mean the chronic or "surgical" tubercular kidney. This is the type we see most often and the one we can do most for. In the preparation of this paper, I have quoted freely from papers by Richard F. O'Neil, John Caulk, and Edward L. Keyes. It would seem that there should be no necessity of retelling such facts as are here set forth, but when one sees these poor tubercular cases with their whole urinary and genital tracts involved, because of early procrastination or from inability to diagnose the condition early enough to help the sufferer, one is moved to reiteration in the hope that at least a few more of these patients may be saved.

Tuberculosis of the kidney is the primary focus of infection in all cases of purely urinary tuberculosis. In most all cases the kidney becomes infected through the blood stream and the infection begins at the base of the pyramid (Caulk). The kidney may become infected by direct extension from tuberculosis of the spine, intestines, or peritoneum. In such cases, the portion of the kidney first infected would, of course, be that portion in contact with the original infection,

Tuberculosis of the kidney is said to constitute about thirty per cent of all the surgical kidneys.

## SYMPTOMS.

This disease occurs most frequently in early adult life. The most common presenting symptoms are vesical, dysuria, frequency, polyuria, hematuria, and pyuria. In other words, cystitis. I think it not out of place in this discussion to insist that there is no disease that we can term cystitis. Cystitis is, so far as I know, always a symptom of a disease and the origin should be sought.

Hematuria may be terminal, from cystitis, or may be mixed with the urine and

come directly from the kidney. All cases of hematuria should be thoroughly investigated for tuberculosis.

Pain in the affected kidney is not a frequent symptom. Pain in the unaffected kidney from hypertrophy occurs nearly as often. Ureteral colic occurs sometimes, due to blood clots forming. Fever is present in most all cases sometime during the course of the disease. The urine is usually pale, having a low specific gravity, cloudy, due to pus and often bacteria are not found except when strained for tubercle bacilli. A purulent urine in which no bacteria are seen is very suggestive of tuberculosis. On the other hand, finding tubercle bacilli without pus does not constitute tuberculosis of the kidney, as in any form of tuberculosis, the kidneys are apt to filter out the bacilli and remain uninfected themselves.

## COMPLICATIONS.

Common complications in the male are epididymitis, vesiculitis and prostatitis. Whether these become involved from the kidney infection or through the blood stream is not by any means certain. Cystitis is almost a constant finding though at times is not present in those early cases brought to the attention of the physician on account of hemorrhage.

Both kidneys are involved in a fair proportion of cases.

## DIAGNOSIS.

Cystitis with a hazy urine, free from bacteria with ordinary stains, is suggestive. Such a urine should have its sediment strained for tubercle bacilli. In a fair proportion one will be able to find the organisms. With any degree of care in collecting the urine, smegma bacilli can be ruled out. Guinea pig inoculation may be used but this test is not infallible. Probably the most important findings are to be made with the cystoscope, and is the only means of localizing the diagnosis previous to operation. It is not always easy to cystoscope these patients. Their bladders are quite irritable and often contracted. Where it is possible, I think it well to use sandalwood oil and bladder instillation of 1 per cent phenol for a week or ten days before cystoscopy is attempted and then it is well to use local anæsthesia. If the ureters are hard to locate, I think it a good plan to not spend much time the first examination and later inject a 0.5 per cent solution of indigo carmine intravenously

\* Read before the Section on Genito-Urinary, Dermatology and Radiology, Annual Meeting, Oklahoma State Medical Association, Tulsa, May 12, 13, 14, 1925.



—wait four or five minutes and then insert the cystoscope. In this way, one can get an estimate of the renal function as well as making the examination of the shortest duration. X-ray is of value, in the form of a pyelogram, especially after the pelvis is involved. In old renal tuberculosis, a picture shows a deposit of lime salts.

#### COURSE AND PROGNOSIS.

Tuberculosis of the kidney is always progressive. Caulk states that there has never been an authentic case of spontaneous healing and that the ultimate outcome is complete destruction of the kidney and usually severe involvement of the urinary tract. Auto nephrectomy is not very rare, but destruction of a kidney is not a cure of the disease and the complications continue to progress.

Treatment consists of removal of the affected kidney. Some authorities advise removal of the most involved kidney, even when both are infected. That it prolongs life and makes life more comfortable while they are living. Post operative treatment consists of plenty of sunlight, tuberculin and the usual care of any other tubercular patient.

Contra indications for nephrectomy as given by Keyes are: (1) any general condition contra indicating a major operation; (2) active, severe tuberculosis of other parts of body; (3) far advanced tuberculosis of both kidneys; (4) any kidney disease markedly reducing the function of the better kidney. Marked tuberculous nephritis of opposite kidney or tuberculous myocarditis are warning signs but not necessarily contra indications to operation. The results of nephrectomy are usually prompt relief of bladder symptoms and a general improvement of health. It may not be out of place to warn against the use of ether as an anæsthetic in these cases as latent or active tuberculosis of the lungs is usually present.

#### SUMMARY.

Tuberculosis of the kidney is a progressive, destructive disease. The diagnosis is easy if one will use all the methods we have at our disposal. The treatment is the early removal of the affected kidney and careful living after its removal.

## SOME IMPORTANT FEATURES IN THE TREATMENT OF FRACTURES\*

FRED S. CLINTON, M.D., F.A.C.S  
TULSA

Nicholas Senn has truly said "Bad results following fractures have been the tombstones that have marked the termination of an otherwise successful professional career of many an illfated, unlucky and disappointed practitioner." The truth of this statement, together with the fact that the ever increasing hazard of the fast multiplying automobile and the increase in number of industrial accidents, has required that the treatment of fractures be given more thought and study.

The purpose of this paper is simply to recall your attention to some of the fundamentals and a brief outline of some procedures which have seemed worthwhile in the care of a fairly large number of fracture cases.

The value of the X-ray can not be minimized, and we believe that every injury in which there is the slightest suspicion of fracture should be radiographed. A picture confirming a diagnosis of no fracture is many times of great value to the employer or insurance carrier, as well as a great relief to the patient's mind. If a fracture is present, a lateral and anteroposterior picture should be had, before and immediately after reduction. It is our belief that subsequent radiographs at intervals of two to four weeks are almost invaluable for the intelligent conduct of any fracture. Many times changes in position of the fragments take place without apparent external manifestation, and it is very much easier to correct the position while the callous is still soft and pliable. It is also well to have a picture taken at the termination of the case. The realignment of fractures under the fluroscope, while somewhat complicated, would be of great value were it not for the danger to patient and surgeon, which must not be underestimated.

While the value of X-ray has been proven, still one is never justified in subjecting a patient, who would have a good functional result by the closed method, to an open operation simply for the sole purpose of a pretty radiographic result. The X-ray is

\* Read before the Section on Surgery and Gynecology, Annual Meeting, Oklahoma State Medical Association, Tulsa, May 12, 13, 14, 1925.

an exacting taskmaster and many good functional results are minimized in the estimation of the laity by the indiscriminate showing of radiographic end results.

Though the bony deformity may be clearly demonstrated by the X-ray, no eye can see the extent of the injury to the nerves, bloodvessels, muscles and tendons. For this reason, we think that the greatest consistent gentleness and care should be used, rather than brute force in the so-called setting of fractures. A fairly accurate knowledge of anatomy and a general anesthetic will do much to minimize the surgical trauma in the care of fractures.

As to the time of reduction, we thoroughly agree with Warbasse that "The sooner a fracture is reduced and immobilized the less will be the swelling and the more satisfactory the result." We simply mention to condemn the routine practice of waiting for the so-called "traumatic reaction" and swelling to subside before corrective measures are undertaken. Pain and shock are produced by the injury to the soft parts caused by the displaced fragments of bone, and when these are rapidly and gently replaced and held in position, the shock and pain usually subside very promptly. Murphy thought that "freedom from pain was a constant assurance of reduction."

The simplest effective dressing is the best. There are many complicated and expensive contrivances on the market, but ordinarily we have found the use of moulded plaster of Paris splints after a modification of Stimson's method or circular plaster of Paris bandage, supplemented by extension and proper position of the limb, to be quite satisfactory in most of the fractures of the long bones. However, no dogmatic rule can be laid down for every case, and often the ultimate result will depend on the experience and ingenuity of the surgeon.

Every possible effort should be made to reduce and hold a simple fracture as such. But if a good functional result is not possible by the closed method, and the condition of the patient permits, an open reduction should be accomplished. If the fracture can be simply reduced and held in position well and good, but often it is impossible to keep the fragments in position without some foreign internal splinting. For this purpose we have found beef bone plates and screws or beef bone intramedullary splints very satisfactory. The wound

is closed in layers without drainage and a plaster of Paris splint applied. Two important points are, first thorough hemostasis and second an adequate plaster of Paris dressing which immobilizes the joints above and below the fracture. We must not rely upon the internal splint to supplant proper external fixation.

Compound fractures present another formidable obstacle, namely infection, and whether the fracture is originally compound or is made so by open reduction we should be ever conscious of this hazard and utilize every possible precaution for its prevention. Much depends on the first attention that is given a compound fracture. We do not advocate a radical debridement because it has been truly said that none of us possess the surgical clairvoyance to tell which tissue is viable and which is not. Still we believe that the obviously destroyed tissue should be removed with usual aseptic precautions. Then the wound should be cleansed with ether or benzine, then thoroughly iodinated and the excess of iodine removed by alcohol, if it is preferred. The ends of the bone fragments should not be touched by even the gloved fingers, but a gentle reduction accomplished and the wound closed with as little handling and trauma as possible. The application of much tension in the sutures of muscle and skin should be avoided. It is much safer to make lateral incisions and approximate the lips of the wound at a later sitting, if necessary.

The length of time a limb should be immobilized is always a problem and the exact time must be decided by the individual indications. But we are beginning passive motion and massage much earlier than formerly and we believe the length and permanency of the disability are reduced by early, intelligent mobilization of the injured limb.

In closing we would like to again call your attention to the following points.

1. Importance of frequent X-Ray check up.
2. The utmost gentleness in reduction and immobilization of fractures.
3. Closed treatment of simple fractures, where possible.
4. Thorough asepsis and antisepsis in compound fractures.
5. The simplest effective dressing is the best.



6. Securing the best functional result which includes Reduction, Immobilization and Mobilization.

*Discussion:* McLAIN ROGERS, M. D., F.A.C.S., Clinton.

Presuming that there is no diversity of opinion among surgeons that the X-Ray and Fluroscope are an accepted guide in determining necessary treatment and in checking and recording progress in fracture cases, our obligation in its uniform application is fairly well fixed.

The essayist raises a question worthy of discussion when he speaks of the indiscriminate showing and parading of X-Ray pictures to the laity. Conversations purported to occur between surgeon and the laity, about X-Ray pictures of fractures have of late too often been determining factors in adverse decisions in court procedures in cases of malpractice.

Notwithstanding our essayist in the wisdom of his own council cautions us about this procedure, he says that X-Ray pictures are a great relief to the patient's mind in negative cases. While it appears to be the rule to show X-Ray pictures to patients and their families it behooves us to not only be careful of our construction to the laity but make your records show full and guarded construction of such cases.

I agree that early alignment of fractures is best for both the comfort and welfare of patient, but in cases where open operation is a necessary choice a few days delay adds to resistance of injured tissue.

In securing and retaining coaptation of fractures by open operation the general rule of certain fundamentals must obtain, yet the best results follow where the individual surgeon has mastered whatever method he may use.

In selecting splints in open operation, whether inlay, medullary or otherwise we still use and prefer the bone of the patient.

Wet dressings over compound fractures by promoting serous drainage and preventing the immediate sealing tightly of the wound by blood and lymph will often prevent suppuration.

#### HARDER TO STAND THAN WALK.

Standing causes more strain on the arches of the feet than walking because there is no relief from weight-bearing in standing. Many persons can walk miles without tiring, but suffer considerably if compelled to stand in a street car or elevated coach for thirty minutes.—Hygeia.

#### NATIONAL BOARD OF MEDICAL EXAMINERS ANNOUNCE RESULTS OF EXAMINATIONS.

Dr. Horace D. Arnold of Boston, President of the National Board of Medical Examiners, following a meeting of the Executive Committee here yesterday, announced that two additional States, Connecticut and Utah, have notified the Board that henceforth they will accept its certificate qualifying physicians to practice medicine in those States. The Board has been active since 1915 in establishing a standard qualifying examination of such character that its certificate can be accepted by all State Boards licensing physicians. Its certificate is now recognized in more than 30 States, and also in Great Britain.

The meeting here was attended by Dr. Arnold, Major General M. W. Ireland of Washington, Surgeon General of the United States Army; Rear Admiral E. R. Stitt of Washington, Surgeon General of the United States Navy; Dr. J. S. Rodman of Philadelphia, Secretary of the Board; Dr. Walter L. Bierring of Des Moines, Iowa, and Everett S. Elwood, Managing Director of the Board.

Dr. Arnold, who was formerly Dean of the Harvard Graduate School of Medicine, also announced the results of the Board's June medical examinations. A total of 508 were examined, the largest number ever to take the written examination of the National Board. The examinations were held at 30 medical schools throughout the Country including Harvard in Boston, Cornell in New York, University of Chicago in Chicago, Tulane in New Orleans, University of Texas in Galveston, Washington University in St. Louis, University of California in San Francisco, and the College of Medical Evangelists in Los Angeles.

The Board also held examinations during June and July in Part III which is a practical and clinical test and the final examination of the candidate. These examinations were held in Chicago, Cleveland, Galveston, Minneapolis, New York, Philadelphia, Portland and San Francisco. They were attended by 138 candidates, of whom 130 passed successfully and were granted the certificate of the Board.

Of the 334 candidates who took either the complete examination in Part I (which covers the first two years in medicine) in June, or completed Part I by taking subjects previously postponed, Ralph Lichenstein of Philadelphia, who obtained his medical education at the Jefferson Medical College, Philadelphia, earned the highest number of credits, securing 394 out of a possible 425. Euclid P. Ghee of Jersey City, who is a member of the class of 1927 of the Harvard University Medical College, stood second with 392.3 credits. The other candidates among the 10 highest were as follows:

LeRoy Goodman of Kansas City, Mo., Harvard Medical School, 383.5; John F. Lecocq of Lynden, Washington, University of Oregon Medical School, 380.; Maxwell Bogin of Brooklyn, New York, Yale University School of Medicine, 379.2; Guthrie Y. Graves of Scottsville, Kentucky, Vanderbilt University School of Medicine, 374.8; Phillip F. Shapiro of Chicago, Illinois, Rush Medical College, 374; Max Davis of Dorchester, Massachusetts, Harvard University Medical School, 373.5; Jacob Sugarman of New York, N. Y., Boston University School of Medicine, 372.8; F. William Marlow, Jr.,

of Syracuse, N. Y., Harvard University Medical School, 372.5.

In the Part II examination (which covers the third and fourth year in medicine), Dr. Reginald H. Smithwick of Boston, Mass., who is graduated from the Harvard University Medical College this spring, stood the highest of the 174 candidates with 204.5 credits out of a possible 225. Dr. Millard S. Rosenblatt of Portland, Oregon, also a graduate of the Harvard Medical School, stood second with 203.9. The other candidates among the 10 highest won the following rates:

Lawrence W. Sloan of Salt Lake City, Utah, Harvard University Medical School, 203.4; Marshall N. Fulton of Providence, Rhode Island, John Hopkins School of Medicine, 201.5; John W. Rich of Claremont, California, University of Pennsylvania School of Medicine, 201.4; John W. Klopp of Philadelphia, Pennsylvania, University of Pennsylvania School of Medicine, 200.5; Herman E. Pearse, Jr., of Kansas City, Missouri, Harvard University Medical School, 200.2; Theodore Reichbaum of Sasteon, Pennsylvania, Harvard University Medical School, 200.2; Donald A. Carson of Glens Falls, New York, Columbia University College of Physicians and Surgeons, 200.1; Reinhold O. Ebert of Marion, Wisconsin, Cordell University Medical College, 200.1.

#### RADIUM (MESOTHORIUM) NECROSIS

An investigation into the subject of radium necrosis was suggested to Frederick L. Hoffman, Newark, N. J. (Journal A. M. A., Sept. 26, 1925), by a number of unusual cases of necrosis among young women all of whom had one time or another been employed at a radium plant engaged in the manufacture of luminous watch dials. Twelve cases were studied. The patients had all done precisely the same work and in precisely the same way. They all were in the habit of wetting a penciled brush with their lips, while in use, for the purpose of painting watch dials with luminous or phosphorescent substances. Apparently, radium necrosis occurs only under certain and quite exceptional conditions. It is not the fact of general exposure to radioactive substances or nearness thereto, but apparently, the direct result of introducing such substances in minute quantities into the mouth through the insanitary habit of penciling the point of the brush with the lips. Every case investigated gave an unmistakable history of this habit, while numerous roentgenograms clearly indicated the consequences to both the roots of the teeth and the jawbone.

#### PULMONARY TUBERCULOSIS; PROLONGED REST AND THE ABSORPTION OF DEPOSITS

Gerald B. Webb, Colorado Springs, Colo. (Journal A. M. A., Sept. 19, 1925), insists that the rest in pulmonary tuberculosis should be prolonged many months after the temperature and pulse have become normal and sputum has disappeared. Tuberculosis deposits start to clear away after six months of rest, but may not be completely absorbed until from two to three years of rest.

#### TREATMENT OF GENERAL SEPTICEMIA BY GENTIAN VIOLET AND MERCUROCHROME-220 SOLUBLE

By inducing staphylococic septicemia in the rabbit, W. D. Gatch, H. M. Trusler and J. E. Owen, Indianapolis (Journal A. M. A., Sept. 29, 1925), have approximated the conditions in which the clinician undertakes the intravenous use of gentian violet and mercurochrome. Furthermore, because of its constant fatality in the rabbit, the treatment of this infection constitutes a crucial test of the drugs. From these experiments it appears that gentian violet and mercurochrome, when injected in safe doses into the blood stream of rabbits with staphylococic septicemia, do not accomplish a therapia sterilisans magna. A large dose of either drug injected in the presence of an overwhelming infection may hasten death. Either drug, when properly employed, will exert a temporary bacteriostatic action in the blood stream. The ultimate benefit to be derived from this retardation of the infection depends on the resistive powers of the animal.

#### OKLAHOMA HEALTH CONFERENCE TO SHOW FILM ON DIAGNOSIS OF TUBERCULOSIS

Of interest to physicians especially in Oklahoma, will be the Tuberculosis and Cancer sections of the program of the Oklahoma Health Conference to be conducted in Oklahoma City October 22 and 23. While others will not be excluded these two programs of the Conference will be technical and of interest to physicians only. The Cancer division will be in the nature of a clinic for the study and discussion of diagnosis. The Tuberculosis division has been promised the government film "Diagnosis of Tuberculosis", which deals with the method of percussion, auscultation, etc. Right and wrong methods of procedure in making diagnosis are presented in this film which has been pronounced wherever shown the finest thing of its kind that has yet been produced.

#### THE VITAL CAPACITY OF THE LUNGS IN PNEUMONIA

A study made by John H. Arnett, Philadelphia (Journal A. M. A., Sept. 26, 1925), of the vital capacity in thirty-two cases of pneumonia, of delayed resolution and empyema, yielded the following data: In pneumonia, the vital capacity is greatly reduced early in the disease. The determination may therefore be of distinctly diagnostic value in doubtful cases. The greatest reduction generally occurs shortly before the crisis. The advent of the crisis may therefore at times be predicted in advance. Cases of uncomplicated pneumonia almost constantly exhibit a rapid rise in the vital capacity in the first five to ten days from the crisis. Patients with empyema and delayed resolution do not exhibit such a rapid rise. The vital capacity may therefore assist in diagnosing empyema or unresolved pneumonia. The vital capacity increases gradually for months after clinical recovery from pneumonia or empyema has occurred. In many cases it probably never entirely returns to normal.



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DR. CLAUDE A. THOMPSON.....Editor-in-Chief  
Barnes Building, Muskogee, Okla.

DR. P. P. NESBITT.....Associate Editor  
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## EDITORIAL

### FUNCTION OF THE OKLAHOMA PUBLIC HEALTH ASSOCIATION

Recently three directors of the Musko-  
gee Public Health Association, a subsidi-  
ary of the Oklahoma Public Health Asso-  
ciation, tendered their resignations. The  
tender was made, apparently, on the  
theory that too little returns were being  
received by the County from the total  
collections derived from the County, and

the reason given by those resigning for  
this condition was that the "overhead",  
that is, executive expense, was out of pro-  
portion to the receipts. One of the gentle-  
men is quoted as saying that very little of  
the amount received was expended upon  
those affected with tuberculosis.

As the JOURNAL understands the mat-  
ter the Oklahoma Public Health Associa-  
tion was never organized for the purpose  
of rendering treatment to anyone in par-  
ticular, but for the purpose of arousing  
public interest in the problems, especially  
of tuberculosis; in upholding the hands of  
those in charge with discovery, advising,  
segregating, treating and preventing  
diseases. The efforts of health officers,  
unassisted by an intelligent united public  
are almost sure to prove abortive, if not  
entirely futile, so far as lessening the ever  
present menace of tuberculosis and simi-  
lar diseases is concerned. It seems to be  
generally admitted by students of these  
problems that we never will accomplish  
much headway against the conditions un-  
til there has been wide dissemination of  
knowledge concerning prevention. This  
can only be done by education, and, as the  
State has not seen fit to undertake this  
important work, organization of Public  
Health Associations, whose membership  
should consist, not only of physicians but  
laymen as well, followed as the next best  
thing to do in an effort to at least do some-  
thing.

It seems that criticism over just where  
every small bit of receipts raised by charit-  
able contribution to this cause should be  
expended is hardly worth while. On the  
contrary it is distinctly discouraging to  
those who have given liberally of their  
time and thought, to see such a spirit creep  
into the matter. It is disunion where  
union should prevail, non-cooperation  
where cooperation should exist.

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### Editorial Notes—Personal and General

DR. I. V. HARDY, Medford, attended the clinics  
at Rochester, Minn., during September.

DR. and MRS. A. L. STOCKS, Muskogee, re-  
turned recently from a vacation spent at Omaha.

DR. J. R. SWANK, Enid, spent several weeks  
at the Mayo Clinic in September, taking a post-  
graduate course.

DR. and MRS. WILLIAM L. BONNELL, Chick-  
asha, returned recently from a several weeks'  
vacation trip to New Mexico.

DR. C. EDGAR KAHLE, Drumright, has removed to Norman.

DR. FRED S. CLINTON, Tulsa, spent a delightful vacation in Colorado.

DR. C. E. SEXTON, Stillwater, recently spent two weeks visiting with relatives in Indiana.

DR. J. R. PRESTON, Weleetka, spent a few week's vacation in his old home in Kentucky, during September.

DR. J. W. CRAIG, Vinita, has moved to Miami, where he will engage in the specialties of skin diseases and X-ray therapy.

DR. CLAUDE E. PUTNAM, in the Indian Service, has been transferred to Mescalero, New Mexico, with a substantial promotion.

DR. M. L. HUTCHINSON, Ryan, has removed to Denton, Texas, where he is associated with local doctors who are building a 55 room hospital there.

DR. ROY L. COCHRAN, McAlester, has resigned as full time County Health Officer of Pittsburg County to resume general practice at Caddo.

UNIVERSITY OF OKLAHOMA Medical School reports a slight increase in the enrollment this year, the number being 180, as compared with 162 in 1924.

DR. W. A. FOWLER, Oklahoma City, has been elected Fellow of the American Association of Obstetricians, Gynecologists and Abdominal Surgeons, and attended the annual meeting recently of the Association at Hot Springs, Va.

THE THIRD SUMMER COURSE in Ophthalmology and Oto-Laryngology at Denver in August was attended by Dr. J. H. Moore, Hobart; Dr. Fred B. Hicks, Oklahoma City; Dr. Roy W. Dunlap, Tulsa; Dr. G. Pinnell, Miami; and Dr. C. M. Bloss, Okemah.

BLAINE COUNTY MEDICAL SOCIETY has elected the following new officers: Dr. H. E. Huston, Watonga, president; Dr. H. M. Krebs, Eagle City, vice-president; Dr. W. F. Griffin, Watonga, secretary-treasurer; and Dr. L. H. Murdock, Okeene, delegate.

PAYNE COUNTY MEDICAL SOCIETY, in spite of slippery roads on a bad, rainy night, held a meeting at Perkins September 25, with 72 per cent of the membership present. Dr. R. W. Holbrook, Perkins, read a paper on "Health Conservation"; Dr. L. R. Wilhite, Perkins, a paper on "Bismuth in the Treatment of Syphilis" and Dr. Lea A. Riely, Oklahoma City, spoke on the "Balm of Unity" to physicians, discussing historical features of medicine and concluding his remarks upon the subject of "Diabetes". Dr. A. L. Mitchell, physician to the A. & M. College at Stillwater, was a visitor.

DR. LLOYD B. FOSTER, Walters, City Commissioner, has resigned and located at Oklahoma City.

DR. and MRS. D. S. DOWNEY, Chickasha, took a three weeks' motor trip in the Ozarks during August.

DR. LELIA E. ANDREWS, Oklamoma City, returned recently from a vacation trip to Michigan and Indiana.

DR. J. S. ALLISON, Tahlequah, has been appointed attending physician for the Sequoyah Training school.

WESLEY HOSPITAL, Oklahoma City, announces plans for a new \$250,000 Wesley Hospital building, with provisions for at least 100 beds.

DR. JAMES L. SHULER, Durant, attended the Frisco Medical and Surgical Association meeting at St. Louis recently, and also the Chicago surgical clinics, incidently visiting his son, Dr. Ashley Cooper Shuler, who is an intern in the Michael Reese Hospital, Chicago.

#### DOCTOR MILTON HENRY EDENS

Dr. M. H. Edens, of Anadarko, died at Wesley Hospital, Oklahoma City, on September 11, 1925, of uremic poisoning, following an operation for ruptured appendix.

Dr. Edens was born in Grandbury, Texas, April 1, 1873, one of a family of twelve children. His education was acquired at the Grandbury College, and at the Georgia University, from the medical department of which he graduated in 1902. He located in Caddo County shortly thereafter. He was married to Miss Hattie Florence Gard, in 1902, at Marshall, Ills. He has been an active member of his county society ever since his location there and was a member of the state association and a Fellow of the A. M. A., and was president of the Caddo County Medical Society in 1912.

He was a physician and surgeon highly esteemed and respected both by the profession and the laity. Dr. Edens has enjoyed a large and successful practice in his community for more than twenty years. He served in the Medical Corps of the Army during the late war and was a member of the American Legion and of the Masons. He was buried at Anadarko from the Methodist church under the auspices of the Masonic lodge of Verden and the American Legion of Anadarko.

He is survived by his wife and a daughter, and four brothers and three sisters.

His untiring efforts, his skill and sympathetic interests have won for him a place of lasting gratitude in the affections of his many friends.



## DR. JOHN W. DUKE,\*

## A TRIBUTE

Dr. John Williams Duke, son of Jacob K. Duke and Mary Williams Duke, was born near Scobey in Yalobusha county, Mississippi, on June 5, 1868, where he grew to manhood, on a cotton plantation. His great grandfather was also named Jacob K. Duke. The Dukes were related to the Kuykendall and Van Zandt families which came from Holland at an early date and settled in the New World. The Dukes came from Normandy to England, the first name being LeDuc. They settled in Suffolk and between 1660 and 1670 emigrated to America, settling in Virginia and the Carolinas, thence migrating to Alabama, whence his father came to Mississippi in 1828. His mother's father came from Wales, and her mother, a Davidson, was of Scotch-Irish descent. His ancestors on both sides fought for the Colonies in the American Revolution.

Having attended private schools and academies, he entered the state university at Oxford, Mississippi, where he remained two years and then entered the medical department of University of Tennessee, located at Memphis, known as the Memphis Medical College, graduating in 1891. He also graduated from the medical department of the University of New York in 1893, where he was clinical assistant in the department of mental and nervous diseases. In 1894 he was appointed a member of the medical staff of the Manhattan State Hospital, Ward's Island, New York, from which place he resigned in 1895 to accept a place as assistant physician in the Connecticut State Hospital at Middletown, Connecticut, where he remained until 1900, when he located at Guthrie, Oklahoma Territory. He also studied in Europe, attending clinics at the University of Heidelberg, and visiting other institutions on the Continent, preparing himself for his future work in his chosen field of medicine.

On January 30, 1901, he was married to Miss Isabel Perkins, daughter of Edward Thomas Perkins and his wife, Lucy Conelia Hale Perkins. His wife is a lineal descendent of John Haynes, the first governor of Connecticut.

Soon after coming to Guthrie he established a Sanitarium for the treatment of mental and nervous diseases, known as the Duke Sanitarium, which he owned and successfully conducted until his death on October 10, 1920. As a physician his influence soon began to extend over an ever

widening circle until his services were in demand in every part of Oklahoma Territory and afterwards over the state. As his acquaintance extended his personality and influence began to be felt, not only in a professional way, being recognized as at its head, but also in business and public affairs. In 1905 he was elected mayor of the City of Guthrie, Oklahoma Territory, then the capital, and continued in that office until after the erection of the new state. In 1911 he became secretary of the State Board of Medical Examiners, and whilst holding this position took the lead in establishing reciprocity with many states as to the licensing of physicians and did much towards elevating the standard of the medical profession in the State of Oklahoma.

In 1912 he became professor of mental and nervous diseases and medical jurisprudence in the Medical College of the University of Oklahoma, and so continued until his death. In 1914 he was appointed State Commissioner of Health by me when I became governor of the state, he being given a free hand in the reorganization of that department. His weekly health letters, which were published in more than four hundred weekly newspapers throughout the state, during his term of office, tended in a great measure toward the uplift in health ideals. Through his influence the legislature was induced to pass a law which placed municipal water sources and sewerage systems under the supervision of the State Board of Health. The State Lunacy Law, through his efforts, was revised and the management of the State Hospitals for the Insane placed under a board of experts, and commitment of patients to such institutions under supervision of said Board was required. During his term as health commissioner a pathological and chemical laboratory was established as a part of such department, at which all chemical and pathological work, including the Wassermann test for syphilis, and of water supplies, both private and public, was done free of charge, thus bringing the benefit of this laboratory within reach of everyone. He also caused to be reorganized and made efficient the Vital Statistics Department. In 1920 he was elected president of the Oklahoma State Medical Association, which position he held at the time of his death.

During the World War he was chairman of the District (Appellate) Exemption Board for the Western District of Oklahoma. These duties, in addition to those as state commissioner of health and with the medical department of the State University and the supervision of his private affairs, including the sanitarium, must have caused over work and contributed to his death. He also participated in the party activities of the Democratic party, in 1916 being a delegate to the National Democratic convention held at St. Louis, Missouri. He was a patriot and physician of eminence and exceptional integrity.

His death removed from the walks of men not only an upright citizen and learned physician, but also from the thinning ranks of the early settlers of the Territory a man of culture who gave tone and character to the social and intellectual life of that period. As a physician with high ideals, as a citizen active in the public welfare, as a neighbor, gentle, distinguished and courteous, as a friend, dependable and steadfast, and as a husband devoted, loving and faithful, he will be best remembered. He leaves a heritage of a life well lived and a name unsullied.

\*The many friends of the late Dr. John Williams Duke, president of the Oklahoma State Medical Association at the time of his death, conceived the plan of having his portrait done in oil and hung in the Historical Society at the State Capitol in Oklahoma City. After this plan was consummated and the painting placed a memorial address was delivered by Judge Robert L. Williams, which we print in full.

**OBSTETRICS and PEDIATRICS**

Edited by Carroll M. Pounders, M.D.  
532 Liberty National Building, Oklahoma City

**WHAT POISONS KILL CHILDREN—Plain facts  
About Health and Disease.—Hygeia, August,  
1925.**

Seventy children among the policy holders of a large insurance company were victims of accidental poisoning in 1924. Young children furnished the largest group. In 57 of these cases the nature of the poison was ascertained. Strychnine, one of the deadliest poisons caused 14 deaths; lye and other caustic alkalis, 6; fireworks, 5; vermin exterminators, which usually contain arsenic, 5; and kerosene and gasoline, 3.

The strychnin was taken in the form of cathartic pills by seven victims and in tonics by three victims. Strychnin is an ingredient of many "patent" or proprietary medicines but the law in most states does not require any caution label to be placed on the package.

It is unpardonable negligence on the part of any government to permit such deadly drugs to be dispensed in mixture for medical use without compelling the manufacturer to put a conspicuous warning label on every bottle or package. Parents should be repeatedly and emphatically warned to place every bottle, box, or package containing anything of a poisonous nature well out of reach of children. They should instruct the children, just as soon as they are old enough to comprehend the matter, in the importance of handling poisons with care, the dangers of poisons and especially the dangerous nature of many "patent" medicines. This should be taught in all schools as well as in the home.

Only when knowledge of these facts become universal and when the necessary precautions are taken in every household will we be saved from the deplorable and unnecessary loss of life from accidental poisoning.

**TREATMENT OF INTRACRANIAL HEMORRHAGE IN THE NEWBORN.—Clifford G. Grulee M.D., J.A.M.A., August 1, 1925.**

The hemorrhage usually occurs on the surface of the brain, most often over the convexity, but at times beneath the tentorium. Sometimes it occurs within the ventricle, frequently leading to rupture of the ventricle and the escape of the blood on to the surface of the brain. It is thought that the destruction of nervous tissue by pressure from hemorrhage takes place within twenty-four hours. The early symptoms are very unreliable. Death may occur within a few hours without any symptoms that point to involvement of the brain. It is hard to diagnose the condition within twenty-four to forty-eight hours. The author does not feel that we are always justified in assuming that the hemorrhage is necessarily the cause of the mental deficiency that follows in all cases. He believes that the hemorrhage may be favored by brain defects that already exist. Nor does his experience justify such a bad prognosis as is usually given. He has seen cases that showed all the classical symptoms of intracranial hemorrhage make perfect recoveries without any

interference. It is stated that the decompression operation has been pretty well discarded. There are objections to tapping the hemorrhage by way of the anterior fontanel. One cannot be sure of the location of the hemorrhage. If the vessels are not yet thrombosed, removal of the blood results only in refilling the area with blood; furthermore, if the hemorrhage has stopped, it seems hardly possible that the brain substance should have escaped damage.

Objections to spinal puncture are raised on the grounds that it necessitates the holding of the child in such a position as to definitely produce venous congestion in the cranial cavity, favoring further hemorrhage. The findings of the fluid are questionable due to the technical difficulty of doing special punctures at this age. Also the same objections are found here that were given against tapping by way of the fontanel. The practical results from spinal puncture have been unsatisfactory. The author feels that the best possible treatment is absolute quiet and rest.

**TRANSFUSION AND INJECTION OF BLOOD IN PEDIATRIC PRACTICE.—A. Hyanson, M.D., Archives of Pediatrics, July, 1925.**

Blood injection may be regarded as a substitute for transfusion. It does not require special technique, special apparatus, or the typing of blood and may be carried out by any medical man. The blood is taken from the arm of either parent, or any healthy donor with an ordinary Luer syringe and thrown into the muscle—10 to 30 cc.—with great pressure. The injection must be made immediately to avoid clotting and followed by gentle massage of the muscle for a few minutes to aid in the diffusion and absorption of the blood. The site of the injection may be the buttock, either side of the triceps muscle, either side of the back, axilla, outer aspect of the thighs, or outer aspect of the calves. The injection may have to be repeated, especially in melena neonatorum and umbilical hemorrhage up to as many as five injections daily. Indications for blood injections are: hemorrhage of the newborn, sepsis of the newborn, jaundice, severe athrepsia of the nursing and malnutrition in the older child, simple anemia with low hemoglobin, secondary anemia, von Jaksch anemia, and leukemia. In extreme cases where life is threatened, or in cases not responding to the injections, transfusion is indicated.

**RURAL PROBLEMS IN MATERNITY AND CHILD HEALTH.—J. H. Mason Knox, Jr., M.D., Southern Medical Journal, August, 1925.**

The writer points out that the life giving agencies of pure air, restful surroundings, sunlight and nutritious food are not properly evaluated in many rural homes. Thousands of children in the country sicken and die unnecessarily, and others grow into weakened adolescence because deprived of part of their birthright. The infant mortality rate in a number of our large cities, notwithstanding the overcrowding and the racial admixtures, has been reduced to a point lower than that of the surrounding rural areas. In all cities where efficient child organizations operate, the death rate of children of mothers who carry out the instructions of doctors or



nurses in their homes, is reduced further. This neglect of the supervision of the development of the country child as compared with his city brother is strikingly illustrated in the larger number of physical defects which he is permitted to carry uncorrected into later life. The question is asked: Of what use is fresh air from hill and plain to the occupants of a farm house, sleeping with windows firmly closed, or what avail are fresh vegetables, meats and fruits, if their life giving properties are destroyed in their preparation, or if the best are sent to city markets? A plea is made for the securing of the active acceptance in the rural home of simple and reliable education in health matters. This is to be brought about by the teaching in the public schools of personal hygiene, of household economics, including the care of children. Also by the work of the public nurse, private organizations, clubs, churches and public health associations. It is pointed out that at present the public is undersold on health. If enterprising methods of salesmanship can be increased almost indefinitely the absorption of Ford cars, of various soaps, chewing gums and crackers, why are we so backward in securing an increased absorption of health—the greatest material blessing to any community or individual?

### BACTERIOLOGY and PATHOLOGY

Edited by Wm. H. Bailey, A.B. M.D.  
Wesley Hospital, Oklahoma City

**BONE TUMORS.**—Dr. Barney Brooks, St. Louis, Mo., So. Med. Jr., April, 1925.

The author divides bone tumors into three groups, from a practical rather than a pathological standpoint; 1st, Clearly benign tumors; 2nd, Clearly malignant tumors, and 3rd, Tumors intermediate, between groups one and two.

The first group contains those tumors which are generally recognized as new growths that do not invade adjacent tissues or produce distant metastases. Examples of this group are osteoma, chondroma, and benign bone cysts.

The second group contains those that produce distant metastases. Examples of this group are the periosteal sarcomas.

The third group contains those tumors that are intermediate as regards malignant characteristics. They invade and destroy adjacent tissues but do not produce metastases. The term sarcoma of bone should be applied only to the second and third groups, which might practically be classed as a single group.

In the tumors that give rise to distant metastases little can be hoped for in the way of surgical or any other treatment because the metastases are probably always formed before even the earliest symptoms appear. The intermediate group only invade adjacent tissues and are always cured by whatever means is used that effects a complete local removal of the new growth. It is not always possible to differentiate between these two last groups either by clinical, X-ray or even microscopic examination.

Dr. Brooks reports a series of 83 cases of primary bone tumors in adults, 61 of these were clearly of the benign type, 15 were malignant and the remaining seven cases reported in detail, are the intermediate type

The author's conclusions are as follows:

1. For practical purposes all sarcomata of bone may be divided into two groups. In one the tumor forms distant metastases and in other no distant metastases occur.

2. There is at the present time no hope of cure in the first group, while all cases of the second group are cured by any means which result in a local removal of the tumor tissue.

3. The clinical differentiation of these two groups is difficult and often impossible.

4. Bone tumors may be as effectively cured by complete local excision as by radical amputation.

5. Exploratory incision for diagnosis or local operative removal does not influence the ultimate prognosis of the disease.

6. Every means available including exploratory incision and removal of tissues for microscopical diagnosis should be instituted to determine if the bone tumor is of the metastasizing or non-metastasizing variety.

7. In a given case, therefore, of sarcoma of bone, local excision of amputation is to be chosen according to which gives the best immediate functional results.

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"The Role of the Clinical Pathologist in Hospital Efficiency."—Dr. Malcolm T. MacEachern, Chicago—Jl. of Lab. and Clinical Med., Aug., 1925.

The author quotes Clause 5 of the Minimum Standard for Hospitals of the American College of Surgeons, "That diagnosis and therapeutic facilities under competent supervision be available for study, diagnosis and treatment of patients; these to include at least (a) a clinical laboratory, providing chemical, bacteriological, serological and pathological services; (b) an X-ray department providing radiographic and fluoroscopic services."

In order to be able to fulfill these requirements in a satisfactory manner, the author gives the following pre-requisites: 1st, Adequate accommodations; 2nd, Essential facilities; 3rd, Efficient personnel; 4th, Proper organization; 5th, Laboratory records; (a) Requisition for work desired, (b) Report of findings, (c) Daily report, (d) Filing of reports, (e) Cross index; 6th, Laboratory charges; 7th, Routine examinations; 8th, Daily contact between clinical pathologist and staff; 9th, Periodic check-up on work as to quality and quantity.

Dr. MacEachern states in his conclusions that, it is his belief that the laboratory has been an important contributing factor in the great increase in hospital efficiency during the past few years. He mentioned the following points especially: 1st, The assisting of the clinician in making a more accurate and intelligent diagnosis; 2nd, The eliminating of unnecessary, incompetent and illegal surgery; 3rd, The stimulating of a more thorough clinical interest on the part of the staff thru Clinico-pathological Conferences.

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**BLOOD TRANSFUSION; ITS DANGER AND LIMITED VALUE.**—J. F. Baldwin, M.D., F.A.C.S., Columbus, Ohio. American Journal of the Medical Sciences, July, 1925.

1. Transfusion is a procedure by no means free of dangers, some of which are absolutely unavoidable.

2. It is of no value in acute sepsis, but its use in that condition is particularly dangerous.

3. In chronic sepsis its value is only in improving the anemia when that has reached a more or less dangerous point.

4. It is of no use in burns except in chronic stages when the main condition is that of anemia.

5. It is of no ultimate use in pernicious anemia, but its uses are attended with more or less hazard, so that it is questionable if the end results are of any real benefit.

6. Its chief value is in conditions of profound shock or acute anemia from hemorrhage, as in post partum hemorrhage, ruptured ectopic pregnancy and so forth. Particularly is it of value when given immediately preceding or following some operative procedure in which acute hemorrhage forms an important factor.

7. It seems to have little or no value in shock unless that shock is the result of acute hemorrhage.

8. Its great value in hemorrhages seen occasionally in newborn infants has apparently been conclusively established. It seems to be in such conditions unnecessary to type the mother's blood which can be taken at once and the injection of a small amount into the vein of the infant, or preferably perhaps into the superior longitudinal sinus, may prove a life saving procedure.

#### THE LIFE CYCLE OF PEPTIC ULCER.—

Burrill B. Crohn, M.D., Samuel Weiskopf, M.D. and Paul W. Aschner, M.D., New York.—*Archives of Internal Medicine*, April, 1925.

1. Chronic peptic ulcers may form within two or three weeks of the onset of symptoms. This conclusion is based on the history of the patient, the observation of the occurrence of the niche within two weeks of the onset of the symptoms, and, finally, on the ease with which such short timed ulcers can be made to disappear under medical treatment (from ten days to two weeks).

2. Chronic ulcers achieve their maximum size within a few weeks and do not thereafter extend their borders.

3. Pathologic and roentgenographic evidence indicate that healing in the intermission stage does progress. The degree of healing and its permanency depends on various factors. The younger the individual and the shorter the history, the greater the tendency to healing. Cases with long intermission periods and with mild attacks heal more readily than those with continuous active symptoms. An ulcer in a person over 45 years of age can heal only with difficulty.

4. Histologic evidence indicates that healing takes place by the filling of the crater with firm granulation tissue, by retraction of the muscularis, by contracture of the opening and by the regeneration of the mucous membrane. We have no pathologic specimen of gastric ulcer in which complete healing has taken place. We have several specimens indicating the healing of duodenal ulcers in the intermission stage.

5. Cases of duodenal ulceration in which there has been hemorrhage seems to heal most readily.

6. Neither pathologic evidence of healing nor roentgenographic demonstration of the disappearance of the niche is to be considered as proof of

clinical cure. Ulcers may readily heal in the intermission stage, but, unfortunately, show a tendency to break down again, probably at the same site. A certain number of ulcers eventually heal completely; others do not, and these become surgical cases.

#### EYE, EAR, NOSE and THROAT

Edited by Jas. C. Braswell, M. D.  
726 Mayo Bldg., Tulsa

#### Further Experiences With Dilute Alcohol Nerve-Blocking Anaesthesia In Tonsillectomy.—Sonnenschein, R., Illinois M. J., 1925, xivii, 208.

The author favors local anaesthesia in tonsillectomies and uses the following technique.

From  $\frac{1}{2}$  to 1 c.cm. of a solution made by adding 6 drops of a 1 to 1,000 adrenalin-chloride solution to 15 c.cm. of a  $\frac{1}{2}$  per cent novocain solution is injected in the region of each posterior palatine nerve internal to the last molar tooth. To the remainder of the anaesthetic solution sufficient 95 per cent alcohol is then added to give a concentration of from 25 to 33 per cent, and from 4 to 6 c.cm. are injected external to each tonsil into the aerolar tissue at the level of the junction of the upper and middle thirds of the tonsils but entirely external to it. Dissection is begun after four or five minutes.

#### The Treatment of Chronic Middle Ear Suppuration, Blalock, A., and Crowe, S. J.—*Arch Otolaryngol.*, 1925, 1, 267

The authors studied a series of eighty-six of the most serious cases of chronic mastoiditis treated at the Johns Hopkins Hospital, Baltimore, during the last eleven years. A cholesteatoma was found in fifteen. In every instance a history of long continued discharge was given; the average duration of the discharge was eleven years.

Instead of a radical mastoid operation, conservative treatment was given. The infection in the mastoid cells was thoroughly removed and the passage from the antrum to the middle ear was enlarged as much as possible by removal of cells in the posterior part of the zygoma. Subsequently the middle ear cavity was irrigated with a surgical solution of chlorinated soda, the fluid entering the middle ear cavity by the way of the antrum and coming out into the external auditory canal through the defect in the drum.

If polypi and granulations protruded through the drum, an opening was made into the external auditory canal, external to this membrane, and the obstructions to drainage were removed.

There was definite improvement in hearing in 45 per cent, very little change in 38 per cent and deterioration in 2 per cent.

The discharge completely stopped in 33 per cent, became very slight in amount and intermittent in 45 per cent and remained unchanged in amount or character in 22 per cent.

There had been no intracranial complications in any of the cases.



**Some Points in the Operative Surgery of the Mastoid Which Assures the Quickest Possible Time in Healing.—Barnhill, J. F., Ann. Otol., Rhinol. & Laryngol., 1925,xxxiv, 203.**

Barnhill states that in operations on the mastoid the same care should be taken to prepare the operative field and protect it from a non-sterile environment as is taken in an operation on the brain or abdomen.

The exposure must be adequate for safe investigation and removal of the diseased tissue. The mastoid antrum should be opened in every case and all diseased and suspicious mastoid cells should be eradicated. The osseous wound will heal more rapidly if it is left a little rough. In the majority of cases it is not necessary to remove the tip. The blood clot dressing in mastoid operations promotes rapid healing. In order to favor healing of the incision Barnhill closes the wound with sutures of catgut.

**Serum and Lens-antigen Extract Treatment for the Prevention and Cure of Cataract.—Davis, A. E., Arch. Ophth., 1925, liv, 172.**

The author reports the further progress of his original thirteen patients with twenty-two cataracts treated by serum and lens-antigen extract, and adds to his series of cases that of fifty-nine cases with 109 cataracts.

He accepts Roemer's theory as to the cause of cataracts, and believes that the lens antigen stimulates the body cells to form specific antibodies which neutralize the toxins of faulty metabolism and thus prevents the formation of cataracts. The same specific antibodies effect a cure by liquifying and absorbing the opaque disintegrated lens fibers.

In 131 cataracts treated, the progress of the cataract was arrested with improvement in vision in 65 per cent and without improvement in 27 per cent. In 6 per cent the cataract advanced and vision become poorer.

### ORTHOPAEDIC SURGERY

Edited by Earl D. McBride, M. D.  
1006 First Nat'l Bank Bldg., Oklahoma City

**CLINICAL CASE REPORT: Mercurochrome in a case of Acute Pyogenic Arthritis of Knee Joint.**

C. U., admitted to St. Anthony Hospital August 2, 1925, age 16, white, school boy.

Chief complaint: Excruciating pain right knee.

History: The day before admission the right knee began to ache and swell. By the next morning he was quite ill and could not permit the knee to be touched or moved.

The previous history dates back to the onset of an acute hematogenous osteomyelitis of the right femur in June, 1919. Ten months after primary drainage, a radical operation was performed and after a number of weeks drainage the case apparently cured.

On November 7, 1924, he was attacked with acute pain in right leg, but this time below the knee. The femur was not involved, but the tibia had to be drained. The operation was done within forty-eight hours after onset and he completely recovered within five or six weeks.

In neither of these attacks was the knee involved more than to the extent of a secondary synovitis. When admitted this time it was thought to be a flare up of the tibia or femur but careful elicitation of tenderness proved the knee joint only to be involved.

Examination: The patient appeared pale and in great pain as he lies in bed with knee flexed to right angle. The knee is greatly swollen and reddened. Tenderness was sharply defined about the knee joint proper but the whole leg was covered with blotchy red areas and much warmer than the left. Temp. 103 degrees, pulse 94. White blood count 26,450, ploys 94, lymphocytes 6, hemoglobin 80 per cent, reds 4,500,000. Urine showed trace of albumin and indican. On the same day six hours after admission the knee joint was aspirated to the inner side of patella and 5 cc. of 2 per cent Mercurochrome injected. The aspirated material was 10 cc. of cloudy blood stained serum.

Smear examination revealed many pus cells, a few staphylococci and short chain streptococci. Culture substantiated this finding.

The next morning the area on the inner side where the injection was made was markedly less tender but the outer side of the joint was even more painful, red and tender. The evening of the second day, 24 hours after admission, the outer side of knee was aspirated in two places, one just above the head of fibula, the other above and lateral to the patella. About 10 cc. was obtained which was more viscid and pus like. Five cc. 2 per cent Mercurochrome was injected at each location. Smear did not reveal organism but culture was the same as previous. Five cc. of 1 per cent Mercurochrome was given intravenously immediately after aspiration. There was no reaction from the injections and the next day his temperature did not rise above 99 degrees with his general condition much brighter. His white blood cells were 14,750, ploys 80, lymphocytes 20. Pain in the knee was strikingly less. He did well until forty-eight hours later when his temperature again arose to 104 degrees. Pulse 92, respiration 20 with a slight rigor. Five cc. of 1 per cent Mercurochrome was injected intravenously and the temperature very promptly dropped. From this time the improvement was rapid. The knee could be moved voluntarily. All vicious signs had resided and the patient complained of being hungry. He was discharged on the 14th day after admission with temperature normal and knee joint normal size. Two weeks after discharge patient had full motion of knee joint and was bearing weight.

Discussion: The use of Mercurochrome is still in the experimental state. This case with other similar cases has convinced the writer that it is of great value in acute septic joints if administered early. There were no unfavorable effects from either the intravenous or intra articular injections. The writer is certain that incision and drainage of the knee joint would have been necessary had this antiseptic not acted favorably.

**ELBOW I.**

**NO. 1, EPICONDYLITIS.**—Ralph M. Carter, *Journal of Bone and Joint Surgery*, July, 1925.

The term "Epicondylitis", according to the author, is that condition, characterized by pain, arising in the region of the lateral humeral condyle and radiating distally to the forearm and hand. It gives rise to more or less disability for which its recognition becomes of importance in the practice of Industrial Surgery.

The characteristic feature, pain, is associated usually with a complete lack of objective findings. No definite pathology is known but it is probable that a number of cases are due to a localized periostitis in that region, a result of antagonistic muscular action of the Brachialis and Supinator muscles. A small number of cases are undoubtedly due to an inflamed or calcified bursa in the tissue covering the condyle. The ultimate prognosis in all cases is good, recovery occurring after an indefinite period of time. The treatment for all cases other than those in which there are objective findings as recommended by the author, is prolonged rest. Diathermy may be used to advantage, as an aid to rest. Surgical treatment is employed only in those in which there are objective findings.

**HIP II.**

**MALFORMATIONS AND SUBLUXATIONS OF THE HIP.**—Nove-Josserand, *Revue d'Orthopedie*, March, 1925, page 85.

1. In young children malformations and slight subluxations of the hip are frequent, but difficult to diagnose. They are characterized by shallowness of the acetabulum. With strong muscles and capsule there may be no limp or an intermittent limp with fatigue. There is about one centimetre of shortening, and Trendelenburg's sign may be positive. The treatment is reduction and fixation in abduction for eight months in complete abduction.

2. At 5 to 15 years the author has seen sixteen cases characterized by acetabula which are either shallow or have defective upper borders. Deformities of the head of the femur are inconstant. The signs and symptoms vary with the degree of luxation. Reduction and fixation in abduction is apt to result in an arthritis. Treatment is rest, and in painful cases immobilization for three months in plaster.

3. The author has seen thirteen cases in adults. In five of these there has been a congenital dislocation of the opposite hip. Eight cases had simple painful hips and the other five had definite progressive dry arthritis. Treatment consists of rest and physiotherapy. The author believes that these minor defects in the hip are evidence of subnormal bone which is less resistant to trauma and infection than normal, and that they predispose to osteochondritis, adolescent coxa vara, or dry arthritis.

**SPINE III.**

**Isolated Fracture of the Transverse Process of the Lumbar Vertebrae**, Pierre Wiart.—*Bulletins et Memoires de la Societe Nationale de Chirurgie*, January 17, 1925, page 30.

These fractures are said to be rare, only 31 cases having been reported.

A man twenty-six years of age was caught under a falling wall in such a manner that the

weight came on his back, injuring him especially in the right side of the trunk. On examination his spine was found immobilized by violent pain, his right leg was weak, and he could not stand up. Sharp tenderness in the lumbar region a little to the right of the median line. Patellar reflex diminished on the right and an area of anesthesia on the right buttock. Roentgenogram showed fracture of the right transverse processes of the upper four lumbar vertebrae near their base, or what might be called their necks. The fragments were separated outward and downward about one cm. The mechanism of these fractures is said to be sudden, strong contraction of the muscles which are attached to the transverse processes.

**IMMUNITY IN CANCER**

Francis C. Wood, New York (*Journal A. M. A.*, Oct 3, 1925), makes a lengthy survey of a few of the more important investigations of the question of the capacity of the body to produce immunizing substances against a growing cancer.

The results, he says, can be decided in only one way, and that is according to the Scotch verdict, "not proven." It is quite possible to explain most of the observed conditions without such an assumption. Late recurrences may be due to alterations in the biology of the tumor cells, and we know from experimental work that different parts of the same tumor may be composed of cells of different malignancy. Cells may remain quiescent in lymph nodes for long periods, probably because the conditions of nutrition are different from the ones to which they are accustomed when living normally surrounded by amply vascularized connective tissues. The mere study of fixed and stained tissue can scarcely bring decisive evidence as to whether the local lymphocytosis and fibrosis are cause or effect. The clinical cures produced by radium and the roentgen ray in which viable cells still remain in the tissues do not necessarily require the assumption of immunity or a destructive action of the connective tissues. They can be explained as easily by another assumption—that the dense scar tissue immobilizes the cancer cells and the great diminution in blood supply prevents their rapid growth. The cells are put, so to speak, in a plaster cast and cannot be massaged about the body by muscular or other movements. When the tissues are incised and a large amount of blood is furnished the cells as healing takes place, they are then capable or renewed growth and the patient dies of a recurrence. I have seen such examples five or six years after apparent healing had been produced. Unquestionably, the cells are considerably damaged by irradiation. After treating animal tumors with sublethal doses of irradiation and transplanting them to a fresh host where there can be no question of immune reaction, the tumors often do not make their appearance for months, a period that corresponds to years in human beings. The results of animal experimentation have not been on a whole consistent and permit no conclusions in regard to primary human tumors. In other words, the permanent cure of a cancer implies the destruction of all the cells of the growth. The body offers no assistance to therapy, and the many cures obtained in situations in which it is impossible that the cancer cells should all be destroyed must have a mechanical explanation and not one based in the assumption of an immunity reaction.



### INCIPIENT HYPOTHYROIDISM

William H. Higgins, Richmond, Va. (Journal A. M. A., October 3, 1925), deals with another group of cases in which the metabolic rates were sufficiently near the borderline to make the diagnosis of hypothyroidism doubtful, unless substantiated by other evidence. Twenty-three cases have been selected whose metabolic readings ranged from—11 to 25. A probable diagnosis of incipient hypothyroidism was based on an analysis of the histories, physical findings and basal metabolism, and was further strengthened by the beneficial effect following the administration of thyroid extract or thyroxin. Higgins emphasizes certain so-called clinical syndromes which are not commonly found in the true myxedema types. In the majority of instances, symptoms referable to other pathologic conditions constituted the chief complaint. Contrary to the usual conception of the hypothyroid patient, the pulse rate in this series was below 70 in only a few instances, and in some there was a definite increase above the normal rate. Among the diseases that were associated with the group showing a lowered metabolism, colloid goiter ranks first, occurring in seven of the twenty-three cases. Diseases of the generative organs and the menopause came next in frequency. More than one half of these patients were below their normal weight. Only three cases can be credited with an excessive amount of adipose tissue. Dryness of the skin and dryness of the hair were present thirteen and ten times, respectively. A premature wrinkling of the forehead, which may have some diagnostic bearing, was observed in a number of cases. Nervousness of a local or general nature was one of the most frequent complaints. In some, it was a sensation of tingling in the extremities, or perhaps a sense of constriction about the head; in others, there were periods of depression, emotionalism or other evidences of a neurosis. Fourteen out of twenty-three histories emphasized vague unclassifiable pains as a prominent factor in the illness. This symptom was frequently referable to the abdomen, and was often the source of considerable annoyance in the diagnosis. It was generally inconstant, was neuralgic in type, and varied in intensity from day to day. The fact that the pain bore no definite relation to any particular organ or nerve distribution was its most characteristic feature. Constipation and headache were complained of by thirteen and five, respectively, of the twenty-three patients. Localized edema was observed in seven patients, the lowest metabolism in this group being 16. The absence of certain myxedematous signs was rather striking. In no instance was there any evidence of circulatory changes as shown by arteriosclerosis, vascular hypertension, cardiac abnormalities or renal complications. The patellar reflexes showed no demonstrable delayed response, as pointed out by Chaney, in the more advanced types of hypothyroidism. Anemia was not a complicating factor, and there was no relative change in the differential count of the white cells.

### HOT AIR COMFORT

Heating methods, heat transmission, comfort, types of furnaces and ventilation are discussed by Thomas Hubbard, Toledo, Ohio (Journal A. M. A., Oct 3, 1925) He thinks that Americans are be-

coming progressively more sensitive to temperature and humidity. The popular demand seems to be for higher radiation capacity in the home, in hotels and in public conveyances. (What a shock it would be to the heating trade if we accepted a 65 degree standard.) Climatic conditions and sudden variations of weather are naturally very trying and we invite cold shock by hypersensitiveness. Unhygienic heating combined with foolish estheticism in clothing (e. g., chiffon to furs) results in acute and chronic diseases of the upper and lower respiratory tract. Catarrhal affections, such as chronic sinusitis, even in young children, are far more prevalent than should be tolerated by an enlightened, intelligent people. Medical progress in the study of causes of such diseases is one of the outstanding features of this age, but treatment and cure are handicapped when the unhygienic habit is in itself chronic. The complexion is the color index of good blood and normal skin circulation. It is notorious that in America the natural color index is fading and the cosmetic index is correspondingly high. The skin, like the respiratory mucosa, is actually damaged by hot dry air (and likewise is the hair) and become more liable to chronic diseases. Our present high temperature standard so lowers natural resistance to minor and major infections that restoration to normal health is retarded. The fresh air treatment of hospital surgical cases is testimonial to the healing virtue of tonic temperature and natural humidity in convalescence.

### ROENTGEN-RAY TREATMENT IN BRONCHIAL ASTHMA AND CHRONIC BRONCHITIS.

Roentgen-ray in bronchial asthma and chronic bronchitis in the opinion of Isaac Gerber, Providence, R. I., (Journal A. M. A., Oct. 3, 1925), has been largely neglected in this country. He says that many cases of true bronchial asthma do not respond to the removal of supposed extrinsic causes or to specific therapy, even though careful sensitization tests have been made. A large proportion of these patients may be markedly benefited by careful roentgen-ray treatment. In favorable cases there is a lessening and even a disappearance of the paroxysms and cough, a change in the amount and character of the sputum, and a diminution of the abnormal microscopic elements in the sputum. Two types of roentgen-ray application are used, one directed to the mediastinum and chest, and the other to the spleen. The mediastinal treatment probably has its effect though a shrinking action of the rays on the enlarged tracheobronchial and mediastinal lymph nodes, with subsequent diminution in the irritability of the local fibers of the vagus nerve. The mechanism of the effect through splenic exposure is not so clear, but may possibly be concerned with the release of antibodies which modify the anaphylactic seizure. Chronic bronchitis without asthmatic attacks can also frequently be helped by application of roentgen rays to the mediastinum. The most favorable results are obtained in younger people, particularly in children who have persistent coughs after attacks of grip or pertussis. Cases of a secondary bronchiectases that are not of surgical extent may be improved when other treatment is ineffective.

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## ORTHOSTATIC ALBUMINURIA\*

T. H. MCCARLEY, M.D.  
MCALESTER.

Following Bright's epochal classification and description of nephritis in 1827, medical men for a number of years came hastily to the conclusion on finding albumin in the urine, that the patient was afflicted with Bright's disease. This practice doubtless was one of the factors that prompted Thomas Fuller to say, "The reasons drawn from the urine are brittle as the urinal." I vividly recall with what emphasis the venerable village doctor, with whom I was discussing a case soon after I had ventured to offer my professional services to the public, said: "Doctor, she can't get well, she has Bright's disease of the kidneys; I boiled the urine, added nitric acid and it was like the white of egg." Fortunately his diagnosis was incorrect and his prognosis was not fulfilled. It is a commonplace now to say that there are many conditions other than nephritis in which albumin occurs in the urine.

A practical classification of the albuminurias is:

1. False, in which the urine secreted by the kidney cortex is normal, the albumin being contributed lower in the urinary passages.

2. True, subdivided into (a) That which occurs as the result of a definite kidney lesion, as nephritis and (b) That which occurs without a definite kidney lesion, as that following a cold bath or severe muscular exercise, during acute fevers, in the new born and in labor, cyclic and orthostatic.

It is this last named, orthostatic albuminuria, which I have chosen to discuss. This is a condition in which albumin is found in the urine passed while the pa-

tient is standing and not found in the urine passed while lying down. It appears in affected subjects from three to seven minutes after the erect posture is assumed, and disappears in from three to seven minutes after the recumbent posture is assumed. In quantity, it is usually a heavy trace. It is one or two parts serum albumin to four to five parts globulin, while in nephritis the reverse proportion exists. It seems to occur equally in the sexes. The condition is one of childhood and young adult life. My youngest case was eight and oldest thirty. The statistics as to absolute frequency vary widely, due perhaps largely to the test used. Practically all urines show a trace of albumin with so delicate a reagent as Spiegler's. I have considered as pathological in amount nothing less than .001 to .002 per cent. albumin—distinct band with Heller's test.

The type of child in whom orthostatic albuminuria occurs is well described by Dr. Murray H. Bass of New York as follows: "He has grown rapidly and appears frail and lanky, and is usually pale, due to some vasomotor disturbance, though the lips are very red and the hæmoglobin per cent. is normal. The hands are very often very much cyanosed, especially in cold weather, and sweat easily. The combination of the red lips, pale skin, and the blue hands is very striking. The thorax is narrow and long, with a narrow intercostal angle while the scapulæ protrude prominently like wings. The abdomen is often unduly prominent so that when the child is seen in profile the typical enteroptotic habitus is revealed. The lordosis of the lumbar spine may or may not be prominent. These children are moreover highstrung and irritable; they cry readily and are easily alarmed." To this I should add that they are asthenic, easily fatigued especially by standing, subject to cardiac palpitation, precordial pain, dyspnoea on exertion, headaches and other evidences of vasomotor irritability.

As an introduction to the consideration of the etiological theories, I wish very briefly to present the factors involved in

\*Read before the Section on General Medicine, Neurology, Pathology and Bacteriology, Annual Meeting, Oklahoma State Medical Association, Tulsa, May 12, 13, 14, 1925.

kidney function and the excretion of albumin in the urine. It now seems definitely proven that filtration of urine occurs in the glomeruli and reabsorption of solids in the tubules. The kidney is concerned with the selective removal of relatively simple crystalloid waste products and in the maintenance of the osmotic pressure and the reaction of the blood. The urine is essentially a transudate, having the composition of blood plasma save for the protein. All other exudates and transudates of the body contain protein, therefore, we must ascribe to the normal renal epithelium under normal conditions of osmotic pressure the function of specific secretion in barring albumin from the urine. There is evidence, however, that protein can pass through the normal glomeruli; viz. egg-white can be found in Bowman's capsule shortly after intravenous administration. There is also evidence that though it passes through the glomerular filter in the normal kidney, it does harm to the cells of the glomerulus and renders the structure permeable to the blood proteins. The wonder is not that albumin sometimes appears in the urine but that it is not constantly present.

To reduce the ideas of the preceding paragraph to their practical application; the presence of a true albuminuria compels us to consider as the chief possible causative factors:

1. Condition of the renal epithelium.
2. Pressure and rate of flow through the glomerular capillaries.
3. The reaction of the blood.

In Orthostatic Albuminuria, the urine is normal chemically and microscopically with the exception of albumin. The quantity is decreased without an increase in specific gravity when the patient stands. The blood chemistry and all renal function tests with the possible exception of a slight reduction in the P. S. P. output are normal. It would therefore seem that the claim of those who would explain this condition as a lesion of the renal substance, without further explanation is not tenable, and that we must look to those things which influence the blood flow and reaction for its cause.

Jehle, in 1908, advanced the theory that it was due to a lumbar lordosis producing stasis of the renal vessels, and claimed that all orthostatic cases showed lordosis in the erect position, correction of which

by bending the knee or causing the patient to sit down prevented the albuminuria. Rieser and Rieser ruled out the lordosis theory by the following experiment: They corrected the ptotic defects in their patients by an abdominal corset, and then confirmed the correction by X-ray. The patients were then placed in the erect position until a very heavy trace of albumin appeared. Then the corset was applied and the patient kept in the erect position. The disappearance of the albuminuria came on in about the same time as if the patient had been horizontal, showing that the lordosis, which had not been changed, was not the causative factor.

A subnormal type of constitutional and vascular development which precludes the upright position being maintained with normal physiological function is the theory advanced by Politzer and Teissier.

Erlanger and Hooker blame a vasomotor instability with renal hyperemia. They found in normal and in albuminuric subjects an increase in diastolic blood pressure, and a decrease in pulse pressure in the upright position. The albuminuric patient, however, has a smaller pulse pressure than the normal person, due to increased vasomotor instability in the albuminuric person, which is the cause of the albuminuria. Mason and Erickson confirmed their observations, while Bass and Wessler as well as Rieser and Rieser are sure that the pulse pressure has nothing to do with the albuminuria.

Luff for the British school suggests that the cause may be a deficiency of some normal constituents of the blood, related to a lack of calcium, since many cases were reported cured by the administration of calcium lactate. He fails to take into consideration the fact that alkalization of the urine uniformly causes the disappearance of the albumin and it may be this action of the calcium which is effective.

It may be that foci of infection are the cause, acting to produce a decreased respiratory function of the blood.

Sonne in 1918 reported eleven cases in which ureteral catheterization showed albumin in the urine from the left kidney only. Rieser and Rieser offer as an explanation of this the anatomical difference in the two kidneys. They show that in the left a renal stasis is produced as the result of compression of the renal vein in arterial pincers, composed of the aorta and the mesenteric artery. These pincers act when



the aorta is projected forward by lordosis, or when the mesenteric artery is pulled taut by a visceroptotic tug from the mesocolon. They make the interesting suggestion that the venous congestion of the left suprarenal may influence the general vasomotor instability in this condition.

The etiologic factors which seem to me to be proven beyond contention are:

1. Renal circulatory congestion, because it is possible to produce albumin in the urine of these subjects in three minutes by pressure on the inferior vena cava.

2. Suboxidation of the blood, because the urine becomes free of albumin when rendered neutral or alkaline. This suboxidation is thought to be due to either focal infection or the retention of acids in the renal blood due to the mechanical factors involved.

The prognosis of orthostatic albuminuria is good, being almost unanimously considered to be a comparatively benign condition, and not an indication of approaching renal disease. It is, however, to be considered evidence of lowered general resistance and predisposing to T. B. and increasing mortality. Insurance companies are greatly interested in this condition. Some of their statistics in these cases show that they have a mortality greater than their expectancy, not, I would emphasize, from nephritis but from infections. We must follow a large number of these cases over periods of a number of years before we may have data on which to base an accurate prognosis.

In the matter of treatment, the question whether to do something or nothing is fundamental. In the present state of our knowledge of the condition under discussion, it is my opinion that it should be classed with a compensated heart lesion or a calcified tubercular focus, a potential source of danger. It has been said that as that period, in the history of medicine in which the cure of disease was dominant, was succeeded by that in which the idea of prevention became paramount, so the preventive period is being followed by the present one in which nothing less will suffice than the larger idea of enabling the patient to live happily and fully. Adherence to this ideal requires us to remember that what we do not say to the patient and do for him is often as important as what we say and do. Undue emphasis on the fact that albumin has been found in the urine is unwise, if it is due to orthostasis.

Many of the laity have heard that albumin means Bright's disease and will be made miserable if informed of this urinary finding. However, two observations seem to me to warrant us in doing something for albuminuric cases of this type: (1) The evidence, which is perhaps inconclusive, that the continuous passage of albumin through the kidney does per se damage the renal epithelium; (2) The life expectancy of these patients is less than the average. I have not thought it wise to administer alkalies to these patients continuously, which is the simplest method of freeing the urine of albumin. That the best of hygiene and the removal or treatment of infected foci are indicated on general principles, is patent, but the immediate effect of these measures so far as the quantity of albumin is concerned, is disappointing. The diet should be well balanced and liberal with none of the restrictions of a nephritic diet. The use of a properly fitting abdominal belt is perhaps advisable in some ptotic cases.

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*Discussion:* DR. C. J. FISHMAN, Oklahoma City.

It is important to note one of the fundamental statements that Dr. McCarley brought out in his paper, namely, that the symptom or finding of albuminuria does not establish a diagnosis any more than the finding of sugar in the urine establish-

es a diagnosis of diabetes. It should bring to the minds of all of us, therefore, that a most thorough investigation of all the cases in which there is the presence of albumen should be undertaken in order to determine the exact cause of the condition, and the prognosis of the case after a diagnosis is made.

From a clinical point of view, Orthostatic Albuminuria is seen largely in adolescent young boys, particularly of the thin, tall type, with flaccid musculature, relaxed abdomens, and some degree of under-nutrition. One of the first cases with which I came in contact was in the first years of my private practice, when I found such a case in a young boy, and was fortunate enough to have the co-operation of a very intelligent mother, who was not excited about the condition and who understood the significance of this when explained to her. Neither did she seek indiscriminate medical advice nor become panic-stricken when told that albumen was present in her boy's urine.

The only thing that happens in these cases, in these patients, is that they grow up and get well, except as was pointed out by Dr. McCarley, that they are not infrequently subject to infectious diseases and ills of the type which is more prevalent in individuals who are in a state of under-nutrition; that is, the acute infectious diseases, as well as tubercular infection.

In regard to the usual dietetic management of albuminuria, including Orthostatic Albuminuria, as has been practiced in the past, I only wish to point out how dangerous it is to reduce the protein intake. It has been definitely shown that if the protein content of the blood, including the albumins and the globulins, are reduced to a point of approximately half of the normal amount, which is normally 0.4 of both serum albumin and serum globulin, a state of general edema becomes an added sign of a gross kidney injury. The massive experiment that was carried on in Central Europe during the War, as a result of the starvation conditions there, showed that in long periods of starvation in the absence of a sufficient amount of albumin, the patients became edematous and swollen, and developed the conditions which occur in patients who are kept in a state of under-nutrition as far as the protein food intake is concerned for a considerable period of time. This, therefore, brings out the caution that should be keenly regarded, as to the reduction of the protein food intake.

In addition to this, the alkali treatment is helpful and should be used in order to avoid the acidosis of the tissues that may occur and that is considered by some as responsible for this condition. As far as the etiology of Orthostatic Albuminuria is concerned, it is apparently due, as was pointed out by Dr. McCarley in his paper, to two fundamental conditions, venous pressure on the renal veins due to anomalies in developmental structure or due to pressure by lordosis. In addition to this, the congestion so induced may result in reduced oxygenation and therefore local acidosis in the kidneys, which is the secondary factor present.

If we learn nothing more by this half hour we spent, hearing this excellent paper and the discussions, than to avoid the mistake or marked reduction of protein food intake in the management of these conditions, and to consider every case of Albuminuria as a problem the etiology of which must be worked out carefully, it will have been enough to compensate us for the time spent.

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#### PERINEPHRITIC ABSCESS\*

JOHN Z. MRAZ, M.D.  
OKLAHOMA CITY.

Non-suppurative perinephritis is a condition which accompanies practically all cases of kidney infection of long duration.

It varies from the slightest inflammatory reaction to extensive infiltration of the peri-renal tissues and their gradual transformation into a fibro-lipomatous mass.

It represents an effort on the part of the organism to protect itself against an extension of the infection within the kidney. If a cure of the kidney infection occurs through non surgical means, the peri-renal inflammatory deposit is absorbed wholly or in part depending on its extent.

Its principal interest to the urological surgeon lies in the great difficulty of successful mobilization of the kidney in surgical attacks upon this organ in the presence of the dense adherent inflammatory tissues. It is particularly apt to produce great thickening of the kidney pedicle and every man present is no doubt familiar

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with the difficulties experienced in doing a nephrectomy under such conditions.

Perinephritic abscess, on the other hand, is of interest chiefly because of the various diagnostic difficulties it presents, the treatment being a simple matter once the diagnosis is made.

The formation of pus in the peri-renal tissues may occur in various ways. Its source may be an extensive kidney infection such as pyo-nephrosis, infected stone or renal tuberculosis. This usually occurs as a process of direct extension although direct lymphatic connection has been demonstrated between the pelvis of the kidney and the kidney capsule. A number of cases have been reported that appeared to be transmitted through the lymphatic channels as a result of inflammatory conditions in the genital and lower urinary tracts; among these may be mentioned infections of the bladder, prostate, testicle and para-metrial tissues.

In none of these cases, however, could the blood streams be ruled out as the possible mode of transmission. A certain small percentage of cases are due to extension of infection from surrounding organs such as pleura or retro-cecal appendix and to penetrating wounds or traumatic rupture of the kidney.

There remains a group of cases probably most numerous of all which are purely metastatic in origin usually from some distant focus of infection. These cases are always blood borne and are frequently dependent upon some more or less insignificant type of peripheral infection such as boils, paronychia tonsillitis, etc. In some cases a blow over the kidney during the course of one of these minor infections seems to be the determining factor in producing a localization in the peri-renal tissues.

Theoretically it is possible for bacteria to pass directly from the renal artery through the kidney to the peri-renal tissues there producing suppuration without involving the kidney itself. Practically, however, most if not all of these metastatic cases of perinephritic abscesses are preceded by the formation of one or more cortical abscesses in the periphery of the kidney. Such a cortical abscess, often so small as to escape detection, ruptures, discharging its contents into the surrounding tissues and suppuration ensues.

The diagnosis of this condition may be comparatively simple or extremely difficult.

If in the course of a known kidney infection, the patient's symptoms become aggravated, with increased and persistent pain in the lumbar region followed by the formation of a swelling at this point with distinct muscular rigidity, it would be difficult indeed to mistake the condition for anything else than perinephritic abscess. If, however, as often happens in the metastatic cases, the urinary findings are negative or at most, show a few red blood cells or an occasional leucocyte and the local symptoms are not pronounced, the condition may be quite confusing.

The case may be slow in developing or actually remittent in character presenting a picture of a low grade sepsis and may have to be observed for some time before a definite conclusion can be reached. Furthermore the pus may be located about the upper pole of the kidney in which case the symptoms of pain, tenderness and swelling in the costo-vertebral angle may be absent or delayed; or such a case, by the close proximity of the pus to the pleura, may produce pleural or pulmonary symptoms which further confuse the diagnosis.

In the vast majority of cases, however, if a careful history is taken, questioning the patient particularly about recent peripheral infections or trauma, and a thorough physical examination made, the findings in the presence of a high white cell count will usually be convincing.

Acute unilateral focal suppurative nephritis might present a picture difficult to differentiate from peri-nephritic abscess. The proper diagnosis is of great importance for prompt nephrectomy may be necessary as a life saving measure. In this condition, which fortunately, is very rare, the principal point to note is the fulminating character of the disease. The temperature is extremely high and the patient appears acutely and alarmingly ill.

Extension of infection from neighboring organs is often overlooked for the reason that the symptomatology of the original condition usually overshadows that of the peri-renal suppuration; and so does its relative importance, considered from a prognostic and therapeutic standpoint.

One should remember that, while comparatively rare, bilateral abscess does occur and may be either of metastatic or renal origin.

Needling for pus as a diagnostic procedure, is frequently employed. It is valuable in certain cases and safe when carefully

done. Failure to find pus should not deter one from operating, for it is anything but easy to locate a small abscess with a needle and failure necessarily follows when the pus happens to lie anteriorly to the kidney. The writer has knowledge of a case of sudden death occurring while needling for a suspected peri-nephritic abscess in an eight year old boy. Although not definitely ascertained by autopsy, death was supposedly caused by air embolism following perforation of the vena cava. It might be well to take heed of this actual occurrence and to be especially cautious when using this method in children or emaciated individuals.

The treatment of this condition is incision and drainage. One should not be discouraged if pus does not appear immediately upon reaching the kidney. When this occurs, the finger should be carefully passed around to the anterior surface of the lower pole and even to the upper pole if necessary. If this is done one will rarely fail to strike the pus pocket providing, of course, that the proper diagnosis has been made.

In the metastatic cases, little is to be gained by searching the kidney for cortical abscesses and it is conceivable that damage might be done by carrying infection on the exploring finger to hitherto uninfected tissues. These cases almost invariably recover promptly and completely by simple drainage. In cases with stone, this should be removed and the kidney saved when possible.

A careful preliminary cystoscopic work-out with functional tests and pyelogram will usually tell us the exact state of the affected organ. When this shows extensive destruction and the other kidney is found to be compensating, nephrectomy should be performed at the time of drainage of the abscess.

In those cases which occur in the course of a renal tuberculosis, the therapeutic indications are obvious and need not be taken up here.

#### CASE REPORTS

Case 1—Mrs. L. D. S., age 24. At the age of 19 was confined to bed three weeks with fever, pain in right abdomen radiating to bladder, frequent and painful urination. Shortly afterward had a similar attack but less severe.

Present trouble began five weeks ago and consisted of chills, fever, severe throb-

bing pain in right lumbar region and frequent painful urination with occasional hematuria. Has been continuously confined to bed during present trouble and has lost in weight and strength.

Presents typical picture of sepsis. Temperature 100, pulse 98. A tender mass is palpable in the right lumbar region. W. B. C. 23,200, Polys 81 per cent, Erythrocytes 4,778,000. Urine shows albumen and numerous pus cells.

Operation—incision and drainage of large right perinephritic abscess. Kidney apparently badly damaged but was not removed. Pus from abscess shows streptococci exclusively. Patient recovered and was discharged from hospital two weeks later doing nicely. Subsequent progress of case not known.

Case 2—Mrs. C., age 59. Soon after coming to Oklahoma three years ago, patient had prolonged seige of chills and fever with a palpable mass above the crest of right ilium. Condition diagnosed malaria. The right sided swelling gradually disappeared.

A few weeks ago had a repetition of these symptoms except that the fullness in right side became larger than with the first attack with constant severe pain and tenderness. On examination a tender mass is found in the right flank, the center of which shows fluctuation. Aspirating needle obtains pus. Incision and drainage of abscess—about four ounces of pus obtained. Patient recovered and left the hospital. The record of this case is incomplete but the abscess apparently followed a pyo-nephrosis.

Case 3—Mr. D. C. Y., age 58. About seven months ago, while pitching wheat, patient sustained a "wrenched back." Three days later he developed a fever which continued for thirty days and was diagnosed as typhoid. As the fever began to subside, he developed pain in the left lumbar region radiating toward the bladder associated with frequent urination. Following this attack the patient failed to regain his health and had a constant dull ache in the left lumbar region. Has lost 22 pounds in weight.

Examination shows an emaciated man with badly infected gums and teeth. In the left lumbar region is found a mass tender to pressure and flat on percussion. Muscular rigidity marked. Prostate gland moderately enlarged but not sensitive.



Cystoscopy attempted but abandoned because of difficulty in passing cystoscope. Urine contains much pus.

Operation—incision and drainage. Hemorrhage encountered and controlled by packing. Patient recovered and reported eight months later much improved in health but still suffering at times with pain in region of left kidney and ureter. A hernia was present at site of operation scar.

Case 4—Mr. J. W., age 38. Ten years ago patient had an attack of pain on the right side and the lower costal region associated with frequent painful urination. Pain subsided but frequency has persisted to present time. Six or seven weeks ago the patient first noticed a tenderness in right lumbar region and a swelling developed at this site four weeks ago. As this increased size he began having fever and chilly sensations. Examination revealed a tender mass in the right lumbar region and a smaller mass in the right inguinal region. Urinalysis—sp. gr. 1020, acid, albumen large amount, few red blood cells and a gross amount of pus.

Operation—incision and drainage of abscess in the right lumbar and inguinal regions. In this case the pus evidently followed the course of the right ureter and presented in the right inguinal region.

The patient left the hospital improved but still draining pus. Subsequent course of trouble not known.

Case 5—F. H., boy, age 5. Healthy child until one month ago when he developed fever, malaise and pain in the right abdomen later becoming localized in the right lumbar region. Fever is intermittent, reaching at times as high as 103. No chills and no urinary symptoms. The patient appears anemic and emaciated. Temperature 101.8 axillary, pulse 130. Right lumbar region shows a large fluctuating mass extremely tender to pressure. Urinalysis—albumen small amount, indican large amount, many finely granular casts, few leukocytes. White blood cells 19,500, polymorphonuclears 94 per cent.

Operation—incision and drainage. About one-half pint of pus was found at a depth of one-half inch from the skin. Recovery uneventful.

The abscess was extending toward the skin and would undoubtedly have ruptured externally in a few more days.

Case 6—Mr. W. B. B., age 24. For the past fifteen years has had attacks of pain in the right renal region, mild at first and gradually increasing in severity with repetition of attacks. No fever or nausea, no radiation and no urinary symptoms. Present attack began about one week ago and has been quite severe. Pain increases on deep inspiration.

Examination negative except for tenderness to deep pressure in right lumbar region. Urinalysis negative except for occasional red blood cell. Leucocyte count 16,000; cystoscopy, including functional tests and pyelogram, negative. Conservative course adopted. Patient left hospital and returned in three weeks with aggravation of all symptoms and with fever and sweats added. Temperature 101.8, leucocyte count 26,000 urinalysis again negative except for an occasional r. b. c.

Operation—abscess incised and drainage followed by prompt recovery. In reply to questionnaire a year later patient stated that incision was soundly healed and health good.

Case 7—Mrs. H. S., age 47. Three weeks ago had infection of right thumb which was incised and considerable pus evacuated. Three days later developed chill, fever to 103, cough, expectoration of blood streaked sputum and pain in left scapular region. Condition improved somewhat and patient resumed her household duties but pain has persisted and she continues to run a low grade temperature. Has lost in weight and strength and appears enemic. Moderate tenderness to pressure and marked muscular rigidity in left lumbar region. Blood count W. B. C. 8,400; R. B. C. 3,160,000; hemoglobin 58 per cent. Urine shows large amount of albumen and a few pus cells. Cystoscopy including functional tests and pyelogram negative. White blood count made two days later 9,200.

Operation—incision and drainage. Four or five drams of thick pus found at lower pole. Recovery prompt and complete.

Case 8—Mr. C. B., age 19. About three week ago patient developed a slight chill, pain across lumbar portion of back and a temperature to 104.

Improved somewhat and returned to work in oil fields a few days later but has felt well at no time since beginning of trouble and temperature runs from 100 to 102 most of time. Has some pain in lower right quadrant which is increased by ex-

ercise and radiates backward to right lumbar region and downward to right testicle. Close questioning brought out history of a small boil in face about time of beginning of trouble.

Physical examination negative except for sensitiveness to pressure along course of right ureter and in right lumbar region. Urine contains an occasional leucocyte. W. B. C. 10,250; Polymorphonuclears 83 per cent. Needling failed to locate pus.

Operation—drainage of abscess. The pus (about three ounces in quantity) was found after considerable searching, at upper pole of kidney. Recovery uneventful.

Case 9—Mr. E. G., age 18. For the past week patient has had moderate pain and tenderness, remittent in character over the right kidney. No nausea and no radiation of pain. In the past two days has had fever and yesterday had a chill. Pain has also developed in right lower quadrant. Has had crops of boils on lower extremities for several weeks.

Examination shows marked tenderness and rigidity over appendiceal region and right costo-vertebral angle. Urine contains a small amount of albumen, occasional leucocyte and a few hyaline casts.

Operation—Because of tenderness over McBurney's point, an appendectomy was done and a healthy appendix removed. Incision then was made over right kidney and a large abscess drained.

Case 10—Mr. C. R. L., age 31. A year and a half ago had an appendiceal abscess drained by Dr. Bailey of Sulphur, Oklahoma. Appendix not removed. About six weeks ago developed pain in right flank radiating forward to site of operation scar. No fever and no urinary symptoms. Is nauseated at times during pain.

Examination shows a right rectus scar containing a discharging sinus which has been present since former operation. Urinalysis negative, W. B. C. 15,000, Polys 82 per cent.

Operation—excision of sinus which was found running upward and backward along parietal peritoneum. Appendix removed from among adhesions in a retrocecal position. Many enlarged glands found.

Patient returned a month later saying that he has pain over lower right ribs and right lumbar region. Sensitiveness to pressure is found in these regions. Tem-

perature 101. Urinalysis negative, W. B. C. 18,500, Polys 82 per cent. Subphrenic and right renal region needled for pus and none found. Two weeks later a definite bulging occurred over the right kidney. This was incised, pus evacuated and tube inserted for drainage. Convalescence slow but recovery finally complete. This was no doubt a case of extension of infection from a case of appendicitis in a retrocecal appendix.

Case 11—Mr. C. S., age 19. Four weeks ago was hurt playing foot ball. This was followed by swelling and tenderness in the left lumbar region. A little later developed a boil on the left forearm associated with fever and axillary gland enlargement.

About the time (2 weeks ago) that the boil was healed, he suddenly developed a steady grinding, boring pain in the left lumbar region. Position does not influence pain. No urinary symptoms.

Examination shows tenderness to pressure in the left lumbar region and left lower abdominal quadrant. Urinalysis—occasional pus cell and occasional hyaline cast. W. B. C. 14,300, Polys 82 per cent. Needling negative for pus. The reason was made clear at operation when about two ounces of pus was found on anterior aspect of lower pole of the kidney. Recovery uneventful.

#### SUMMARY

A summary of cases reported shows three in females, eight in males. Age ranges from five to 59 years, an average of 31.9. Three were left sided and eight right sided; six can be classed as metastatic; four as of renal origin and one an extension from a retro-cecal appendix. Four of the six metastatic cases gave a definite history of peripheral infections just prior to or at the time of beginning of symptoms. Two of the 11 cases, sustained an injury at the time of beginning of trouble. One of these was of metastatic and the other of renal origin.

Needling was performed in six cases and of these failed to locate the pus in two cases. In one of these the pus was later found anterior to the lower pole and in the other at the upper pole of the kidney.

Incision and drainage was done in each case. There were no deaths.

*Discussion:* F. J. BAUM, M.D., McAlester.

It is my opinion that the pathological condition which exists in most cases of



perinephritis will be found in the rupture of a cortical abscess. These cortical abscesses were first described by Isreal and were called by him furuncles, which name very typically describes the condition.

The last three cases of perinephritic abscess seen by me were of metastatic origin; one following a palmar abscess, another following a furunculosis and the third one being a part of the general sepsis which originated during some dental procedure where the gums and mouth were very foul.

In the treatment of each of these cases the ruptured kidney furuncle was identified and treated. In one case by excision and in the other two by the application of pure phenol and in none of the cases has there been a persisting sinus, neither has there been a recurrence of the infection. This leads me to believe that if there is an infected sinus leading through the capsules into the cortex of the kidney, it should, if at all practical, be treated and thereby eliminate the focus of the infection in the operative area.

The above cases were all referred and had been treated by the general practitioner, one for typhoid fever and two for malaria. This seems like an unnecessary mistake to make because in neither of the conditions do we have a leucocytosis with a high percentage of "polys" which as Dr. Mraz has mentioned is always found in all cases of perinephritic abscess.

#### ACUTE NEPHRITIS FOLLOWING PERI-TONSILLAR ABSCESS\*

JOSEPH G. SMITH, M.D.  
BARTLESVILLE

I have had during the past winter a number of cases of peri-tonsillar abscesses in adults and noted an acute nephritis following.

A scarcity of literature on this subject leads me to believe that the physician in general practice, as well as the Laryngologist, has overlooked and failed to properly recognize the possibility of renal changes in peri-tonsillar abscess.

This is a condition developing as a complication of acute parenchymatous tonsillitis, due to the pus invading surrounding

cellular tissue, and forcing its way between the tonsil and pterygoid muscles.

Physicians as a rule, have long recognized the possibility of nephritis following any of the eruptive fevers especially scarlet fever, diphtheria, and other contagious diseases of childhood.

The literature available at this time recognizes the tonsil as a source of infection and the renal changes brought about, especially in the presence of chronic disease of the tonsil. In a letter of March 25, 1925, from the editorial department of the Journal of the A. M. A., it was stated that "We have not been able to find in the literature available, a report of acute nephritis following peri-tonsillar abscess." I wish to differentiate between chronic tonsillar infection, acute tonsillitis and peri-tonsillar abscess. Patients suffering from a peri-tonsillar abscess or "Quinsy sore throat" as it is known to the laity, have been treated by incising the abscess and evacuating the pus; in a few days the drainage ceases, swelling and pain have subsided and the patient discharged.

Loeb in 1910 states that "An experience with acute nephritis, following tonsillitis, during 1908-9 has brought two important facts to mind, namely; first, that acute nephritis is a frequent sequel of tonsillitis; second, this is overlooked in practice by the great majority of practitioners." Loeb made a careful study of this subject at that time, but no mention was made of peri-tonsillar abscess. In recent years special study has been given to focal infections in relation to systemic disorders, the tonsils have come in for a large share of condemnation as being the avenue through which infection reaches the general system, causing rheumatic and other pathological conditions too numerous to mention, however, Anders, in his medical diagnosis edition of 1911 states that "Albuminuria and Glycosuria are unknown in uncomplicated cases of tonsillitis."

C. R. Dufour reported in the Virginia Medical Semi-Monthly in 1907 a case of peri-tonsillar abscess in a "Lady fifty-five years of age, who had had a sore throat for several days; temporary relief was obtained by local applications, but the left tonsil remained quite swollen. A peri-tonsillar abscess developed which was opened and drained after which the throat symptoms subsided, and the tenth day after the onset of the tonsillitis the author found the patient in bed with her face,

\*Read before the Section on General Medicine, Neurology, Pathology and Bacteriology, Annual Meeting, Oklahoma State Medical Association, Tulsa, May 12, 13, 14, 1925.

hands, abdomen and limbs edematous and urine almost suppressed. Examination of the urine showing an Albumen, etc." Of my own cases I will report the following:

Case 1—Male, white, age 33, an oil well driller; had always been healthy and robust. He came to Dr. Green of our city for removal of tonsils, his face was swollen and some oedema of hands and feet, he was referred to me for examination and treatment, he gave a history of having had a peri-tonsillar abscess about two weeks previous which had been incised and drained. Throat symptoms clearing up satisfactorily. Urinalysis; specific gravity 1.010, albumen, hyaline and granular casts. Case yielded promptly to treatment.

Case 2—Female, white, age 18, had had repeated attacks of tonsillitis since childhood, had given birth to a normal baby six months previous; no tract of albumen during pregnancy; had been well and nursing baby to this date when a peri-tonsillar abscess developed on left side of throat, pus evacuated, and throat treated. Patient making an uneventful recovery and discharged. In about two weeks following I was called to the home of the patient and found her edematous over the entire body. Urinalysis specific gravity 1,009, heavy with albumen, hyaline and pus casts. Patient responded promptly to treatment.

Case 3—Male, white, age 25, waiter and husband of Case Number 2. No history of a previous sickness or sore throat of any kind. Peri-tonsillar abscess on left side of throat, abscess incised and drained, throat symptoms cleared up and patient returned to work. In about two weeks patient came into my office complaining of pain in back, headache, dizziness and vision blurred. Oedema of entire body, urinalysis, specific gravity 1,000, red corpuscles, hyaline and pus casts. In a few days oedema subsided but developed a hematuria, patient became alarmed and went to his father's home in Texas and I have not been able to follow him.

#### CONCLUSIONS

1. In every case of acute nephritis, careful examination of the pharynx and history of throat abscesses may determine the etiology.
2. Routine examination of the urine for three to six weeks following peri-tonsillar abscess.
3. There should be more reports and more research relative to the relationship

between infections of the throat and pathological conditions of the kidneys.

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#### ROUTINE POST OPERATIVE CARE\*

J. M. BYRUM, M.D.  
 SHAWNEE

Post operative care as well as operative skill should be a hobby with the surgeon. I realize that, after the operation with the glamor of its spectacular features and the adulations of doctors, nurses and friends, that it is more or less hum-drum to settle down to attentive post operative care. Little do we realize that perhaps a pleasant, comfortable convalescence is more often remembered by the patient than the trials and technicalities of the operation itself. Who will gainsay that the psychology alone of a satisfactory convalescence is not a factor worthwhile in securing the end results of many operations?

In surgery, just as certainly as in general medicine, as in the business world, as in all the varied avenues of life, is it the sum total of the little things performed, with the studied omission of the unnecessary things, that make the perfect and magnificent whole. The cheerful, sincere greetings of the smiling patient leaving the hospital after an uneventful convalescence is almost as thrilling to me as is the consciousness of having performed a most difficult operation under the most trying circumstances. Our studied efforts, then, should be directed to the comfort as well as to the general welfare of the patient.

Fostering this idea of the ease and comfort of the patient as well as the promotion of his physical welfare, is the basic object of this paper.

The prolonged hours of that excruciating pain, the memory of which remains long after return to health; the extended period of that awful thirst, comparable only to the thirst of a certain rich man when he made his memorable appeal for

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water to the glorified Lazarus; the indescribable nausea, producing such ineffaceable tracings of distress, both physical and mental, with which no metaphor remains for the comparison; these have long since become the bugbears of my surgical career and the memories of which remain with my patients only as a stimulus of ghastly nightmares.

This paper will therefore, be limited to a brief consideration of these so called insignificant, unimportant post operative conditions, which seem to happen so often that we cease calling them "complications of surgery" and undertake to square ourselves with the patient by the cheerful (?) remark that it is only "a part of the play," the patient regretting ever having taken any part in the "play," now realizing all too vividly that an operation is not a mere "week-end party," as, perhaps previously portrayed by the loquacious surgeon.

The post operative state is influenced to such an extent by the preoperative, that we should assiduously apply the principles of prophylaxis in properly preparing the patient for the operation. It is, indeed, a period of both mental and physical shock to the average person when brought face to face with the preoperative stage. It is an opportune time for the application of some of the principles of psychology. The breezy, cheerful attendant who devoted a few moments to a sensible explanation of the case in hand will likely leave the patient in such an attitude of optimistic hope that half the battle is won before begun. There is nothing, however, more repugnant to the ethical surgeon and the sensible patient than the meaningless garrulity so often witnessed at this time, nevertheless, it is quite an error to ignore entirely the hopes and fears of the patient.

With the development of this mental poise on the part of the patient, it only remains to eat the usual meal, to retire at the usual hour and to secure the usual restful sleep. Perhaps it is well to assure this refreshing sleep by 10 grains of veronal early in the evening. That the post operative dehydration may be lessened, the drinking of water should be urged for many hours, being discontinued only an hour or so before going to surgery.

The use of drugs at this time is often abused. If there is any question in your mind whether or not to give a purgative as a part of the preparative routine, let me counsel you not to give it. The use of

morphine or atropin before the anesthetic seems still to be a debatable question. Surely there should be no fixed rule in this matter, the nervous state of the patient being the deciding factor so far as the morphine is concerned. Ordinarily atropin alone is used in my work, reserving the morphine until the patient is coming out of the anesthetic, at which time I order 1-4 grain as the maximum dose. Why not give it at this time? Why not repeat it as necessary for the first eight or ten hours after the operation? I feel that those of you who have gone through the terrors of the first eight or ten hours after an operation will agree with me that the use of morphine in liberal amounts is to be favored. I admit that nausea is frequently an end result but somewhere between pain and nausea is a point of compromise. After this first period of pain which usually subsides in eight or ten hours, I seldom use morphine except perhaps to secure rest on the second night, when again it often serves well. At all other times and frequently on the second night as well, 10 grains of acetyl-salicylic acid will usually meet the requirements.

Just here, by way of parenthesis, I wish to condemn the prolonged routine use of the rigid wide spreading retractors. Much of the wound pain immediately following the operation may correctly be charged to their indiscriminate employment. The effect of subsection of muscle fibres to prolonged overstretching is too self evident for discussion.

While on the subject of pain, let me refer to the "gas pains" of the early period of convalescence. The preparation of the patient for operation and a careful operative technic are, perhaps, the greatest preventive factors, a great majority of such pains being the direct result of error, drastic purgation again being mentioned only to be condemned. Gentleness to the nth degree in handling the intestines and a careful observation of the temperature of the splanchnic area are features never, never to be forgotten. Of course everyone uses moist gauze pads, but it sometime appears that they are used more as a whip to the angry gut than as protective measures.

The routine use of a rather hot retention enema, the quantity being limited only by the capacity of the colon—and it is surprising what quantities the anesthetized colon will tolerate—is urgently recommended, serving as it does, a three-fold purpose:

1. Application of much needed heat to the splanchnic area.

2. Supplying moisture to the body, balancing, in short order, the loss occurring during the average operation.

3. An almost perfect mechanical method of rearranging the viscera in normal relation to each other. I might add also that I have found its use a wonderful factor in preventing gas pains.

Gas pains appearing later in convalescence usually mean infection and that the wound should be carefully examined.

Excessive thirst, like other unpleasant things noted in this paper, also is largely chargeable to mismanagement. Dehydration should never be permitted to occur. If the stomach and colon do not take sufficient water to meet the requirements of the body, the free use of water subcutaneously or intravenously is a safe easy process. I have found, however, that the stomach is, at a very early post operative period, very tolerant of small amounts of warm water given at short intervals, if begun as soon as the patient is able to swallow. If much nausea be manifest, it seems well to give a glass of warm bicarbonate of soda water.

The resulting emesis serves practically as well as does gastric lavage at this stage. The dry burning ether throat often described as thirst is best relieved by adding Liq. petrolatum to the warm water sipped.

We are now brought by natural sequence to nausea and again we make a charge against mismanagement. Preparative carelessness, excessive use of ether, defective operative technic, dehydration, faulty nursing, all are penalized by nausea. That persistent nausea due to gastric dilatation, a moderate degree of which being present more often than is usually suspected, is best relieved by gastric lavage. One especial care should always be observed, however, in doing the lavage, namely to remove as much water by the tube as is put into the stomach, least further dilatation be promoted. The even use of heat to the abdomen by means of light weight electric pads is a most pleasant and patent remedy for nausea as well as for gas pains. If peritonitis be suspected, this form of heat with free use of morphine and water are our sheet anchors.

This, Mr. Chairman, completes all I had at first contemplated. However, in conclusion, it does not seem incompatible to refer briefly to the early post operative

diet. If the patient has been taught early water toleration and the system has become water satisfied, early feeding is not an urgent factor, neither does the patient manifest much hunger sensation. I usually direct hot tea the first morning and some fruit juices during the day. The second morning cream of wheat gruel is permitted and a "soft diet" follows until such time as the alimentary canal functions normal. I have no fixed rule about the first post operative enema, the patient's comfort being the guide. I am never in much haste about the enema, the third or even the fourth day usually meeting the indications, yet a low enema may be required at a much earlier hour but it sometimes precipitates gas pains.

Finally let me urge a careful study of the mental phenomena of each patient and a proper application of the principles of therapeutic psychology, always remembering that the beneficent end result of an operation is more often attained in the happy, comfortable, satisfied patient.

#### CONCLUSIONS

1. Sane preparation of the patient for the operation,

2. Do the operation speedily and with a minimum amount of intestinal trauma and a careful conservation of the temperature of the splanchnic area.

3. Protect the patient from excessive early post operative pain by the judicious use of morphine.

4. Prevent dehydration—one of the most important things in any condition, whether surgical or medical.

5. Heat to the abdomen and careful gastric lavage for gas pains and nausea.

6. A careful general conservation of the mental and physical balance that the comfort of the patient may be conserved.

#### ARTERIAL ACCIDENTS IN THE BRAIN\*

ANTONIO D. YOUNG, M.D.  
OKLAHOMA CITY

Cerebral anemia and hyperemia, formerly considered a disease entity, has now come to be recognized as symptomatic and secondary. Both are distinguished by sim-

\*Read before the Section on General Medicine, Neurology, Pathology and Bacteriology, Annual Meeting, Oklahoma State Medical Association, Tulsa, May 12, 13, 14, 1925.



ilar phenomena and so far as clinical signs go, cannot be separated and since the brain is normally subject to more or less rapid and continually changing volume of blood, it is indeed a difficult task to determine when physiology leaves off and pathology begins. In old age, cerebral anemia is a legitimate consequence of arterial degeneration and in certain shocks is a common occurrence, as witness the syncope frequently associated with distressing sights and the rapid evacuation of peritoneal or plural effusion. Chronic hyperemia of the brain is usually associated with, and a part of organic disease of the brain, and along with oedema is responsible for some of the symptoms of such conditions as new growths.

Great importance attaches to cerebral arteritis, not so much on its own account, but because of the severe consequences of hemorrhage and softening. Acute arteritis in the brain may follow infectious diseases, but distinct symptoms do not arise unless thrombosis ensues. This is a common accident. Peri-arteritis means a proliferating affection involving the external coat. This produces diffuse or circumscribed thickenings, and the walls then become weakened, resulting in saccular dilations—miliary aneurisms. There may be scores of these producing a beaded appearance of the blood vessel. These minute aneurisms are almost the exclusive cause of cerebral hemorrhage. Nephritis, tuberculosis and other diseases are frequently the cause of peri-arteritis and is the concomitant of the involution of advanced years and of arterio-sclerosis. Symptoms are usually vague and indefinite until hemorrhage or infection gives rise to plegic disturbances. Rheumatism, severe manual labor, over indulgence in alcohol, and syphilis are all causes of arterial degeneration and various combinations of these causes are frequently found.

The symptoms produced by arterial disease of the brain are varied, but all are due to faults of brain nutrition. They embrace senility, premature senility and degenerative processes, both acute and chronic. The early symptoms are lessened mentality, aphasia, transient or permanent, monoplegias or moderate inco-ordination. Paresthesias are common, as are slight attacks of hebetude and vertigo. At first these attacks are temporary and recurrent and may persist for years before the final break occurs. Headache, insomnia, irritability and childishness are com-

monly observed. The superficial arteries are palpable, hard and tortuous, but it must not be forgotten that while arterial degeneration is a general process, in certain localities it may be greatly accentuated and too often it is in the brain. The blood pressure is usually, not always, high and the enlarged and laboring heart is recognized. The patient is usually constipated and the urine inter-mittingly shows albumin and the formed elements that show nephritis. The same sclerotic process frequently is sufficiently marked to show signs of degeneration in the cord.

It is obvious that treatment, to be of any avail in averting disaster, must be undertaken quite early. Toxic causes must be eliminated, faulty diet, alcoholism, renal, pulmonary and cardiac pathology must receive appropriate management. Spasms of the arteries, known as intermittent claudication, must be relieved if possible and this can usually be accomplished by the use of nitro-glycerine given frequently, and by fifteen grain doses of bromide given every three hours for a few days, then less frequently. If water is freely excreted, large quantities should be given with an occasional dose of mercury. The patient must live a life of moderation, especially in the quantity of food and of mental and physical work. An extra amount of rest in the recumbent position should be recommended. The iodides should be given in moderate doses over long periods of time and for this I prefer the syrup of hydriodic acid. In my opinion, digitalis should be avoided.

Under this plan of management, aphasia, mental disturbances, hemiparesis and other symptoms are frequently completely relieved and remain in abeyance for years. Brain cells deprived of their blood supply for a few hours are irrevocably destroyed, but early treatment as outlined will frequently prevent this catastrophe.

#### POSSIBILITIES OF CO-OPERATION\*

A. C. MCFARLING, M.D.  
SHAWNEE

By drawing aside the curtain of time and gazing upon the dim vista of medical history from the days of Hippocrates down to the present, one is at once impressed with the high ideals and the altruistic

\*Read before the Section on Eye, Ear, Nose and Throat, Annual Meeting, Oklahoma State Medical Association, Tulsa, May 12, 13, 14, 1925.

spirit which dominated the lives of those illustrious pioneers in the profession, whose sacrificial services to humanity resulted in the foundation upon which rests the superstructure of scientific medicine as it is known today.

Hampered on the one hand by ignorance and superstition in the public mind and upon the other by the crudity and inefficiency in their method of technique, the degree of success which crowned their efforts in fighting human ailments, serves but to emphasize their altruism and nobleness of purpose, which is an inspiration to those who are permitted to live in the present, and we write their names upon the pages of history along with those who have immortalized their profession by their works and whose pictures the proud hand of fame loves to paint upon her canvas.

Looking further into the lives of those pioneers of the profession, we find that in assuming the duties of the physician, they presumed to treat any and all diseases to which human flesh was heir. This was not only possible, but in view of their limited therapeutic facilities and lack of medical knowledge, must have been entirely feasible.

But turning the picture and looking upon the broad field of modern medicine as is known today, backed by all the modern facilities for medical research, flanked on every side by a like improvement in the allied sciences, we are impressed with the fact that the domain of medicine has so enlarged its field of activities that it becomes physically impossible for any one person to attain the greatest technical proficiency humanly possible, in each and all of its various departments.

Impelled then to specialization by the ever increasing demands of modern medicine, we are confronted with the problem of so correlating the end results of such specialization that the greatest benefits thus derived may inure to the patient and the good of the profession at large.

Ways and means of accomplishing this result to the best advantage of all concerned have engaged leading minds in the profession for some years, with the result that various plans have been formulated, whereby groups or associations have been organized, which were designed to meet this demand by embracing in their personnel, specialists in the various departments, thus covering the entire medical

field. It is not my purpose to discuss the merits or demerits of such plans, but suffice it is to say that while a great deal of good may have been accomplished by these associations and the theoretical demands have indeed been met in an accademic sort of way, the inability of such organizations to foster that finer personal feeling of human sympathy which formerly obtained between the physician and his patient stands out as militant fact.

Trivial as this bond of human sympathy may appear to the casual observer, to the alert mind of the trained physician, it at once assumes the importance of an "open sesame" to the door of the psycho-therapeutic possibilities inherent within the physical economy of the patient. Deprived of this powerful, somewhat mystic and undefinable influence in our battle against disease, the art and science of medicine will begin to deteriorate toward the level of commercialism.

If this be true, then it behooves us, as medical men, to conserve to our fellowman the highest grade of medical service, thereby upholding the honor and dignity of the profession, by inaugurating every possible means of combating any retrogressive influence.

It is a well known fact that more money is spent in the United States each year upon nostrums and charlatans than the combined gross receipts of the entire medical profession.

It is an equally well known fact that the prospective patient is in every instance, without exception, seeking the very best means for combating the malady from which he suffers. These are but the briefest possible statements of facts, which are so broadly written upon the pages of our every day life that "he who runs may read."

Were I able so to do, it is not within the province of this paper to delineate the remedy for this state of affairs, but in closing I must suggest that it is easily within the mind of man to conceive of a spirit of cooperation among medical men by which much could be accomplished; a spirit of cooperation born of the sincere desire to do the greatest good for the greatest number of people; a spirit of cooperation which places the needs of the patient above all other considerations, thereby laying the foundation for the most implicit confidence in the public mind; a spirit of cooperation which in return for



such confidence would not only render the best service at his command upon the instant, but disseminate such information as would form an integral part of a structure, which when completed, would so fortify the public mind against empiricism, as to obviate in great measure, the necessity for legislative procedures such as have been attempted in the past as a means of reaching certain objectives; a spirit of cooperation which would automatically maintain such standards of education as would enable the medical profession to carry on the work in the same spirit of dignity and honor as those illustrious pioneers who have gone before; a spirit of cooperation that would so equip the medical profession, as to enable it to amply meet the requirements of the present and measure up to all the possibilities of the future.

### BOOK REVIEWS

The Writing of Medical Papers (Second Edition Revised). The Writing of Medical Papers, by Maude H. Mellish, Editor of the Mayo Clinic Publications. Second Edition, revised 12mo. of 168 pages. Philadelphia and London. W. B. Saunders Company, 1925. Cloth, \$1.50 net.

Mrs. Mellish presents rules in this little volume, which no one contemplating the preparation of medical papers should not have at hand. The last word in correct medical writing is the proper verdict on its worth.

Physiological Chemistry, an Intermediate text book, detailing experiments. By C. J. V. Pettibone, Ph. D., Associate Professor of Physiological Chemistry, Medical School, University of Minnesota. Third Edition, cloth, 404 pages, price \$3.25. 1925, C. V. Mosby Company, St. Louis.

This text book is admirably adapted to the purposes for which the author intended. The subject matter is presented in a logical sequence with that directness whereby the student's interest is aroused and his curiosity and inquiry stimulated.

There is a mis-spelled proper name in the bibliography also an incorrect reference on page 321.

J. K. R.

The Surgical Clinics of North America (Issued serially, one number every other month). Volume V, Number IV. (Chicago Number—August, 1925). 246 pages with 54 illustrations. Per clinic year (February, 1925 to December, 1925). Paper, \$12.00; cloth, \$16.00 net. Philadelphia and London, W. B. Saunders Company.

This issue is replete with fine contributions which lack of space prohibits fully setting forth. Among those noticeable are:

"Surgery of the Spleen" by Arthur Dean Bevan; "Urethral Stricture" by Daniel Eisendrath; "Peripheral Nerve Injuries", by Maurice A. Bernstein; "Fracture of the Greater Tuberosity of the Humerus"; "Old Unreduced Dislocation" and "Discussion of Other Complications of Shoulder Dislocations", Golder L. McWhorter; "Analysis of Results Obtained in Gastric Surgery", by Dr. Gatewood, Presbyterian Hospital; "Spastic Paralysis of Infancy and Childhood", and a preliminary report of 16 cases of the "Royle Operation for Spastic Paralysis" as demonstrated by Dr. N. D. Royle, Sydney, Australia, by Philip Lewin and the "Open Operation for Anorectal Fistula" by J. Rawson Pennington. As usual the book is finely illustrated.

The Art of Medical Treatment. By Francis W. Palfrey, M. D., Visiting Physician, Boston City Hospital; Instructor in Medicine, Harvard University. Octavo of 463 pages. Philadelphia and London; W. B. Saunders Company, 1925. Cloth \$4.50 net.

The author of this work presupposes that a correct diagnosis has been made before intelligent and effective treatment is to be undertaken, therefore, diagnosis is mentioned sparingly only. The rules for treatment are prolific and to the point. Reasons for certain procedures are clearly stated and very fine distinctions are made as to the use of drugs, in certain cases and the contra-indications against their use. One feature, a departure in such works, is the advice to be given expectant and alarmed friends and relatives of the patients. The gravity of each condition is set forth. Remembering this may save the attending physician much embarrassment in the end.

### THE DOG AS A CARRIER OF DISEASE TO MAN

Minas Joannides and William A. Riley, Minneapolis (Journal A. M. A., October 3, 1925), emphasize the fact that the dog acts as a carrier of disease when not properly managed. During the last two years, they have examined the intestinal lumen of all laboratory dogs that came to necropsy. Observations have convinced them that it would be unusual if a dog did not have intestinal parasites. Although most of the parasites have adapted themselves to the conditions found in the dog's intestines, and perhaps may not be obnoxious in the human intestine, still there are parasites, such as various trematodes, nematodes and cestodes, that are definitely pathogenic for man. The dog may carry skin parasites, such as scabies, fleas, lice or ticks. Of the diseases of man caused by the grosser animal parasites, echinococcus is the most serious.

# THE JOURNAL

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DR. CLAUDE A. THOMPSON.....Editor-in-Chief  
Barnes Building, Muskogee, Okla.

DR. P. P. NESBITT.....Associate Editor  
814 Surety Building, Muskogee, Okla.

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Articles sent this Journal for publication and all those read at the annual meetings of the State Association are the sole property of this Journal. The Journal relies on each individual contributor's strict adherence to this well-known rule of medical journalism. In the event an article sent this Journal for publication is published before appearance in the Journal, the manuscript will be returned to the writer.

Failure to receive the Journal should call for immediate notification of the editor, Barnes Building, Muskogee, Oklahoma.

Local news of possible interest to the medical profession, notes on removals, changes in address, deaths and weddings will be gratefully received.

Advertising of articles, drugs or compounds unapproved by the Council on Pharmacy of the A. M. A., will not be accepted.

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### EDITORIAL

#### THE SOUTHERN MEDICAL ASSOCIATION MEETING.

Dallas, Texas, November 9th to 12th, offers the Oklahoma physician the best opportunity he has had in many years to attend a medical meeting of National importance without the usual expense and loss of time incident to meetings of the magnitude the occasion will present. Every Oklahoman who can find the time to do so should arrange to be present at the meeting. It will prove to be the best expendi-

ture of time and effort ever made by any of us. Dallas is within a few hours train or automobile travel to the mass of our profession. The program is very rich, covers all the fields of general and special medicine, and everyone, from the general practitioner to the skilled specialist will find there presented the work which interests and profits him the most.

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#### THE PENDULUM AND FIREWORKS

It seems the American people are given to cycles, pendulum like, of recurrences of foolishness. We have witnessed the 'Free Silver' orgy, the "Socialistic-Communist" craze, the "Non-Preparedness" silliness; during which time we have also witnessed the rise and decline in the death rate of thousands of American children and men incident to Fourth of July and Christmas celebrations with murderous fireworks. Under the leadership of the American Medical Association and allied bodies, the appalling death and morbidity rate of this uselessness was so thoroughly cried up some fifteen or twenty years ago, that public opinion and information finally forced all municipal bodies to so regulate these matters that the rate of destruction almost reached the vanishing point. Unfortunately the World War filled the country with an aggressive type of hysteria, seemingly only to find outlet in dangerous, explosive noise, accompanied by a rapid rise in the death rate and injury rate. The laws were not altered an iota. They remain just as they were formerly written, but the carelessness and recklessness incident to and following War and victory has called for their widespread disregard.

The American Museum of Safety recently collected such statistics as were available and this is the result for the Fourth of July, 1925: Killed 111; injured 1030; mostly children. The injured will, in many cases remain maimed, mutilated and blind for the rest of their lives. One hundred forty-eight lost one or both eyes. Thirty-seven were burned to death. Twenty-five died from lock-jaw, while 19 persons were literally blown to pieces.

There is hardly much use to ferret out and punish illegal murder when we permit this legalized, preventable destruction of life to go on. County medical societies seeking their usual outlets for doing good should be able to map out a very effective program to curb this murder.



## PERMANENT FUNDAMENTALS

When Dr. Herbert Moulton, Fort Smith, Ark., retired recently as president of the Arkansas Medical Society, he closed a brief outline of medical problems with a plea to his colleagues to be just as conscientious, as thoughtful, as ethical and friendly as the physicians of the old school.

"Let us try to be as perfect in the knowledge of our day," he urged, "as they were in that of their day."

"Let us try to be as faithful as they in serving the sick.

"Let us be as ethical and just, one to another.

"Let us be as diligent as they in disseminating knowledge and seeking new truths.

"Let us be as faithful in attending all out meetings.

"Let us as unselfishly serve the public."

Within these few simple paragraphs, Dr. Moulton practically covers the multiple obligations of the physician. The aims and ideals, the objects and purposes of medical organization, the activities and fellowship of county medical societies are synchronized into one individual—the American physician.

Without a part, the whole is incomplete. More and more is this becoming a conviction, not only among physicians themselves but the public as well.—*Editorial Ohio State Medical Journal, September, 1925.*

## A MESSAGE TO COUNTY SOCIETY OFFICERS ON INSTRUCTING THE PUBLIC.

Dr. L. S. Willour, McAlester, Chairman of the Committee on Public Policy and Instruction of the Public has formulated the following suggestions for guidance of county society officers who conclude to put on programs in the interest of Public Policy and Instruction of the Public on matters medical. It goes without saying that this is one of the most important works ever undertaken by the medical profession, in this or any state. However, without full co-operation and intelligent assistance from officers and individual members the latter who may be fitted to "Carry a Message to Garcia", the movement will fall short and end in nothing. The suggestions herewith appended are worth serious consideration, should not be undertaken lightly, but only after careful

study. Few medical men are fitted or convincing public speakers. This move demands two things, first thorough understanding of what is to be said, second, a man who knows how to deliver his message. It is commended to your most careful consideration.

## SUGGESTIONS FOR MEETINGS.

First "Sell" the idea to the Society members.

County Societies to arrange the program, select the principal speaker, supply the meeting place and handle all the details of the meeting. This is their show.

Probably best to secure a speaker from outside of the county in which the meeting is held. Suggest such men as the president or secretary of some adjoining County Society, the councilor for your district, or some officer of the State Association or any physician who is known to you and who has an average ability at public speaking.

The program must be attractive and entertaining to the public. You probably will not be able to get out a big crowd simply to hear a medical lecture. Nearly every community is interested in moving pictures. There are on the market numerous films of nature studies such as the development of the butterfly, etc., as well a few on the human body, as the circulation of the blood, pulmonary tuberculosis, etc., which should be of interest to the general public. The lecture could be given before the film was shown or between two parts of it. Make this a big meeting so that some movie theater will be willing to give over one show or a whole evening to it. Pay them for their house and then throw the doors open, free to the public. Don't attempt to put on your program about 11:30 p.m., at the end of an evening after two hours have already been given, the public is not that keen for knowledge or even free entertainment, much after midnight.

Place advance notices of your meeting in the county papers as soon as your plans are formulated. Run a notice of your program in the papers a week before. Have a feature story about your program a day or so before. On the day of the meeting, hand bills could be distributed and placards placed in the store windows.

From the point of public health to the community you should be able to get the support and interest of the city officials. From an educational standpoint, the teachers and parent-teachers associations should

be interested. Many lodges, societies and fraternal organizations have an educational side to their activities and would be glad to unite with you in this undertaking. The churches should be glad to join with you because a more intelligent community is a more religious community and the example of service to the community as shown by the medical profession is the kind of ideals that the church is trying to inculcate.

Make this a community affair. The more people you teach, the more good you will do.

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*Editorial Notes—Personal and General*

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DR. and MRS. R. M. HOWARD, Oklahoma City, visited New York and Philadelphia in October.

DR. McCLELLAN WILSON, McAlester, has removed into his own building from the Model Building.

DR. J. E. ARRINGTON, Frederick, visited his father at Lebanon, Tenn., recently, on account of illness.

DR. FRED F. FULTON, Oklahoma City, is making a tour of Europe and Egypt, and will visit several of the prominent clinics there.

DR. R. A. WORKMAN, Woodward, is building a modern 9 room nurses' dormitory as an addition to the Woodward General Hospital.

DR. H. M. STRICKLIN, Tonkawa, has been named State Chairman of the Rehabilitation Committee of the Oklahoma American Legion.

Dr. WALTER HARDY, Ardmore, attended the annual meetings of the American Railway Surgeons and the American College of Surgeons last month, also visiting the Mayo Clinic at Rochester.

DR. ROY G. MELINDER, Okemah, suffered the loss through death by poisoning of his daughter Inez, aged 15, when she accidentally drank an antiseptic solution in which her father had been bathing an injured hand.

DR. CARL PUCKETT, Oklahoma City, State Health Commissioner, will conduct a series of health conferences and lectures in Roger Mills, Ellis, Harper, Beaver, Texas and Cimarron counties, during the month of November.

DR. L. A. MITCHELL, college physician of the A. & M. College, and Dr. Lucille S. Blachley, of the Oklahoma Bureau of Maternity and Infant Hygiene, will conduct a child-welfare clinic at four different points in Payne County in December.

BRYAN COUNTY is contemplating the establishment of a full time health unit.

DR. ROY A. WOLFORD, Muskogee, visited the Cincinnati Diagnostic Center in October.

DR. R. L. MITCHELL, Muskogee, attended a Physiotherapy Conference in congress in Chicago in October.

DR. W. J. WALLACE, Oklahoma City, announces the dissolution of the partnership of Drs. Wallace and Moore, effective after October 1st, Dr. Wallace continuing his practice at the same address.

DR. W. P. FITE, Muskogee, was in Philadelphia and Boston, attending the Clinical Congress of Surgeons in the former city and visiting his brother at the Massachusetts General Hospital in Boston recently.

AMERICAN UROLOGICAL ASSOCIATION, Southwestern Branch, will hold its 5th annual meeting at Oklahoma City, November 8 and 9. Dr. W. J. Wallace, Shops Building, Oklahoma City, is President.

DR. FRED S. CLINTON, Tulsa, attended the annual meeting of the American Railway Surgeons at Chicago, during October, as delegate from the Medical and Surgical Society of the Santa Fe Railway.

STEPHENS COUNTY MEDICAL SOCIETY was host October 27th to the members of Comanche County Medical Society at Duncan. Thirty-two physicians of both societies enjoyed a scientific and social program.

JAMES B. DUKE, the American Tobacco King, left a will devising \$10,000,000 for the establishment of the largest medical school in the south; \$4,000,000 will be used for the actual construction of the school, the remainder going into endowments.

DR. HUGH SCOTT, Medical Officer in Charge, U. S. Veteran's Hospital, Muskogee, has been busy for some time preparing specifications showing available space and accessories in the Muskogee General Hospital which institution has been in contemplation of purchase by the Bureau for several months. If the Bureau acquires the city hospital there will be added 125 beds to the Veteran's Hospital. It is proposed to use the additional space for caring for the surgical service, as it is especially fitted for that purpose. The Veteran's Hospital has been over crowded ever since its opening, and additional space is badly needed. Plans are now on foot, in the event Muskogee transfers the hospital, to erect a new hospital for the care of city cases nearer the center of population.



**DOCTOR WILLIAM FRANKLIN HARRIS.**

Dr. William F. Harris, Sentinel, Oklahoma, died October 13, 1925, aged 48 years. He was born January 23, 1877, at Shumach, Georgia, and graduated from the Emory University Medical College at Atlanta, Ga, in 1900.

Dr. Harris located at Wood, Oklahoma, until 1907, and has since been in practice at Sentinel, Okla. He was married in 1903 to Miss Eugenia Alice Trotter, to which union three children were born, Carter W. Harris, William Franklin Harris, Jr., who died in infancy, and Sam Garner Harris. Surviving Dr. Harris are his wife and two sons, and a brother, John H. Harris, and two sisters, Miss Carrie Harris, and Mrs. Georgia McCamie, all of Shumach, Georgia.

Dr. Harris was a member of the Masonic Lodge at Sentinel, and had taken the work up to the 32nd degree and was also a member of the Knights of Pythias, the Yeoman Lodge. He was respected as a valuable colleague by his fellow practitioners, and a true friend and helper by his patients and friends. Dr. Harris was a member of his County and State Medical Societies, and was prominent in medical circles for many years.

**BACTERIOLOGY and PATHOLOGY**

Edited by Wm. H. Bailey, A.B. M.D.  
Wesley Hospital, Oklahoma City

**Poor Surgical Risks—Dr. William Thalhimier,—  
Jour. A. M. A.—September 12, 1925.**

The author makes the observation that, "What is necessary is accomplished" He recounts the incident that when Lister had perfected this antiseptic technic, many who saw his methods said that it could not be duplicated by any but the largest and best equipped clinics. Soon it was recognized that surgical asepsis was a necessity and now it is universal. He says that it is probably due to the fact that most patients will recover after aseptic surgery, no matter what their pre-operative and post-operative treatment has been, that unfortunately, these matters do not receive the consideration they should, yet, he predicts that more cures will be accomplished if greater thought was given to pre-operative and post-operative care of the patient.

Dr. Thalhimier divides patients appearing for operation into several groups and mentions the laboratory tests available in determining their proper assignment to these groups. Even in the "so called" emergency cases in which there is no time for pre-operative tests, the post-operative care can still be carried out in accurate detail. He includes under methods of study, "careful clinical investigation", which, he states, is most important. He speaks of additional laboratory "Aids" which is classifying laboratory work as it should be. Much of the value of laboratory tests is lost if their findings are not considered in the light of the other clinical data. In other words, laboratory tests are only additional clinical symptoms and should always be considered as such.

The 1st group is the patient past middle life with a heart of sub-normal functional ability, and also possibly kidneys whose function is below par. He calls attention to the fact that not all organic heart lesions can be discovered by ordinary physical methods, also that a heart with a compensated murmur, no matter how loud, may carry a patient through a major operation and the post-operative period better than a silent functional disability due to a myocardial weakness.

He gives the electrocardiogram as the most important laboratory test to determine cardiac reserve, and says that it is being considered more and more not merely as a research instrument. Any patient showing a weakened cardiac function should be thoroughly devitalized before being subjected to a surgical operation.

The next group is those patients with lessened renal function. This condition, he says, probably has more influence on the post-operative course of patients than any other. Many of the more marked conditions of renal insufficiency are easily discovered by the simple chemical and microscopic urine tests. Some, however, are only to be found by special laboratory tests or very unusual clinical acumen. An increased blood pressure should always make one suspicious of a deficiency of the kidney function. He gives the urea concentration test of Mosenthal as one of the best and simplest tests for renal function. The phenolsulphonophthalein test, he states, is useful in some instances. The blood chemistry he gives as most important.

In the treatment of renal insufficiency Dr. Thalhimier is strongly convinced that the best and most effective diuretic is plain water. To give the kidneys their maximum opportunity to function it is necessary that the circulation be adequate, that the oxygen carrying capacity of the blood be sufficient and that the body be furnished sufficient carbohydrates so that it will not use up its own proteins. Whenever, as is often the case, it is not advisable to give large quantities of water by the mouth or rectum, intravenous injection of physiological salt solution is a most satisfactory and safe method. He advises giving the solution slowly 200-500 cc. an hour at intervals 2-4 times a day. To this he often adds 20-50 gm. of glucose, giving about 100 gms. a day. The glucose itself also acts as a valuable diuretic.

To combat a deficient oxygen carrying capacity of the blood he recommends blood transfusion, preferably by the direct method.

One group of patients that are always in very poor condition for operation are those that have been vomiting for a longer or shorter period. These patients either show an acidosis or an alkalosis. Acetone and diacetic acid in the urine indicates an acidosis. A decreased carbon dioxide combining power of blood plasma, as tested by Van Slyke's method, indicates an acidosis, while an increased combining power is the most important sign of an alkalosis. It is extremely important to differentiate these two conditions as the treatment of acidosis will intensify the condition of alkalosis.

The intravenous injection of glucose solution is usually the method of combating acidosis. Often insulin is given hypodermically at the same time, to speed up glucose metabolism. Alkaline therapy and gastric lavage are definitely contraindicated in alkalosis. Instead hydrochloric acid, ammonium or sodium chloride should be given.

Careful preliminary examination of your patient will also assist in choosing the proper anesthetic to use. This often is a very important factor to take into consideration.

In conclusion the author repeats the plea that impaired physiological functions of the patient demand as much consideration and treatment as their organic diseases. "This," he says, "can be accomplished by developing a physiological point of view and using physiological methods of study and treatment."

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**"Further Studies of Cerebro-spinal Fluid in Infants and Young Children."**—Dr. Stanford McLean, and Dr. F. H. von Hofe. *Amer. Jr. Med. Sciences*, July, 1925.

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In cerebro-spinal meningitis the sugar content of the cerebro-spinal fluid is diminished in cases with moderately increased cell count and absent in fluids with high cell counts, particularly purulent fluids. A gradual increase in the quantity of sugar was not coincident with a decrease in the number of cells.

In a small group of cases of encephalitis the only uniform finding of diagnostic interest was a sugar content higher than in any other type of cases.

In three cases of encephalitis due to lead poisoning the test for globulin was positive and in two of the three cases there was a pleocytosis.

In tuberculosis meningitis the cellular reaction seems to bear no relation to the number of tubercle bacilli found in the fluid.

A diminution of sugar in the fluid was not noted in cases of tuberculous meningitis which might serve as a help in the early differential diagnosis between this disease and encephalitis.

In a small group of pneumococcal meningitis the glucose content of the fluid was similar to the other types of purulent meningitis, that is it was consistently low.

Congenital syphilis may involve the central nervous system without showing an increase in the number of cells in the fluid.

If a blood stained fluid is obtained by lumbar puncture in the first few weeks of life and the clear supernatant fluid is yellow it may be accepted as evidence of cerebral hemorrhage.

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#### **Differential X-Ray Analysis in Bone Disease.**—

Dr. E. H. Skinner, Kansas City, Mo. *Kansas City Clinical Society Quarterly Bulletin*, Vol. 2 No. 1. July, 1925.

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The author divides disease in bone tissue into two classes depending upon whether the condition shows a loss or an addition of lime salts, as demonstrated by the X-ray. These divisions he calls a constructive and a destructive type.

In the construction class he places osteomyelitis and syphilis. The destructive class includes tuberculosis and malignancy.

In osteomyelitis we have a defensive reaction in the bone, a constructive involucrum is formed. It is most frequent in the shafts of the long bones. Of course the infection destroys the bone tissue but all the time nature is building up a defensive line of new bone, the involucrum. The sooner you

relieve the pressure of the pus by incising the periosteum the more rapid is your constructive process and the stronger your defense. The shaft of the fibula is the slowest of the long bones to show the result of the constructive process after infection. Dead bone, as in the sequestrum, maintains its normal density. Its edges are clear cut and it shows a smooth cortical rim where detached. The attached surfaces are irregular and spiculated.

Syphilis, the second type of constructive process mentioned by the author, affects primarily the cortical areas of the bone and not the medulla as does osteomyelitis. The periosteum and cortex of the bone show increased density. The joint lesions of syphilis are characterized by erosions of the joint surfaces and the deposit of calcareous debris. Eventually the joint loses its identity.

Tuberculosis, one of the destructive bone diseases, shows a decalcification with no apparent defense on the part of the bone. It is essentially a disease of the joints. If the process has started in the shaft of the bone it very soon invades the cartilage and the joint cavity. Atrophy of disuse plus that of the disease usually gives poor photographic results. A comparison with the normal in the same patient is always of considerable value. Healed tuberculosis will of course show a denser shadow because of the deposition of lime salts but the joint will be destroyed and its place taken by the bony ankylosis.

Malignancy, also a destructive bone disease, very rarely crosses a joint. The shaft of the bone is destroyed, the medullary portion is invaded and we get an irregular invasion out into the soft tissues. Metastatic tumors in bones may be of two types, osteoclastic, showing complete bone destruction and osteoplastic, showing bone destruction with the ultimate deposition of lime salts.

Summary: "Look upon disease in bone as either constructive or destructive. Proceed to analyze the shadows upon the plate." "If you are going to depend upon X-Ray shadows you must learn to interpret them. Never neglect the full clinical history and laboratory findings. Depend upon the X-Ray for support to your clinical diagnosis. If they don't agree, one or the other is wrong. They must agree if you have correctly interpreted them."

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#### **Blood Transfusion—Editorial in International Medical Digest.** Sept., 1925.

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The writer makes the observation that, "It seems to have become the custom among clinicians to try every new therapeutic measure or remedy on a great many diseases, other than the one in which it was originally intended." He cites cacodylate of sodium as an early example of this and more recently, Insulin.

"This practice," he states, "sometimes results in distinct advances but again it may discredit the remedy because of serious reactions or untoward effects."

This often comes about by leaders making suggestions of new uses. They permit the publication of results as preliminary reports on too small a series of cases. Only too often subsequent series give negative results, "but for one reason or other these negative results are not given the same wide publicity." The new use continues and later it finds its place in text books



and current literature. It is so intelligent to say this or that "has been advocated by X. of Philadelphia in some of these cases, apparently with favorable results." At times some one makes a re-check of the situation and the revelations are often surprising as well as interesting and instructive.

The author reviews such a re-check by Dr. J. F. Baldwin on the real value of BLOOD TRANSFUSION in many conditions for which it has been used (Amer. Jr. of Med. Sci., July, 1925.)

The conclusions reached by Baldwin were:

"That transfusion is by no means free of dangers."

"It is not only of no value in sepsis but it is distinctly dangerous."

"Its only use in burns is in the treatment of secondary anemia."

"In pernicious anemia its use is attended with more or less hazard, so it is questionable if end results are of real benefit."

"In profound shock from hemorrhage and acute anemia from hemorrhage, as in post-partum hemorrhage, ruptured ectopic pregnancy, etc., it seems to be most valuable. Particularly is it of value when given immediately preceding or following some operative procedure in which acute hemorrhage forms an important factor."

"It seems to have little or no value in shock unless that shock is the result of acute hemorrhage."

"Its very great value in hemorrhages seen occasionally in newly born infants has apparently been conclusively established. It seems to be in such conditions unnecessary to type the mother's blood, which can be taken at once and the injection of a small amount into the vein of the infant or preferably perhaps into the superior longitudinal sinus, may prove a life-saving procedure."

### EYE, EAR, NOSE and THROAT

Edited by Jas. C. Braswell, M. D.  
726 Mayo Bldg., Tulsa

**Masked mastoiditis simulating alimentary intoxication.**—Floyd, M. L., Arch. Otolaryngol., 1925, i, 411

The author reviews the cases of twenty-six infants who were treated during the last eighteen months for acute mastoiditis causing symptoms of a severe gastro-intestinal disorder with fever, marked and rapid dehydration, rapid loss of weight and toxicity. In a few cases death occurred within a few hours after the onset of the condition. The eye lid reflex was either lost or very sluggish and the fact suggested exhaustion. There was no crying or other suggestion of earache. The stools, which contained glairy mucus, became loose and frequent. The gastro-intestinal condition did not respond to dietary measures and the administration of fluids did not check the dehydration. The only otological finding was a lusterless or pinkish drum without bulging.

The infants were subjected to bi-lateral mastoidectomies as incisions of the drums were without benefit.

Autopsy revealed no pathological changes in the abdomen or the brain cavity but demonstrated a

marked bi-lateral mastoiditis with pus in the antrum too thick to flow.

**A note on protagulin after extraction.**—Goldie, G. J., Proc. Roy. Soc. Medicine, London, 1925, xviii, Sect. Odontol, 19.

Haemophilic blood is deficient in prothrombin. Its content of calcium is relatively as great as that of normal blood. In cases of severe hemorrhage following extraction of teeth the administration of protagulin has given remarkably good clinical results. Protagulin has been found effective after having been kept for eight years.

The article contains several case reports.

**Tints and their value.** Lawson, Sir A., Proc. Roy. Soc. Med. London, Oph. Sect. 1925, xviii, 24.

The author gives timely advice on the use and abuse of tinted glasses especially those which supposedly protect against ultra-violet rays. His argument is that little ultra-violet rays penetrate the atmosphere of the earth, and of this small amount is absorbed by the cornea and lens. The healthy eye has no greater need of protection than that afforded by nature.

The infra-red light penetrates the atmosphere and the refractive media of the eye. The only protection afforded the eye against these harmful rays is the pigment of the uveal tract and the contractile power of the pupil. A healthy eye thus protects itself from both ultra-violet and infra-red light. Consequently indiscriminate ordering of tinted glasses is unscientific and should be discouraged.

Where there is intense light as in the mountains and long continued exposure to high light or glare and in certain occupations, both ultra-violet and infra-red rays are increased in amount. The normal eye takes care of the former better than it does of the latter, but in such cases the tinted lens are beneficial.

Fieuzel cuts out all of the ultra-violet, almost all of the violet, much of the indigo, and some of the blue and green, but practically none of the infra-red rays.

The choice of tint rather depends upon the effect the tint has upon the subject. Smoked glass is as effective as it ever was but it has the disadvantage of being somewhat depressing in its general effect. Crookes glass is excellent, especially the B and B2 type. The author disapproves of too much protection in this way but believes that in all cases of cataract from whatever cause, tinted glass should be worn in bright sunlight or glare.

**Treatment of deafness by the acoustic method.** Salinger, S. Arch. Otolaryngol, 1925, i, 397.

The manufacturers of acoustic machines claim that benefit is derived from their use. They base their claims on the theory that however far gone there is still an appreciation of sound in the nerve apparatus or in the brain which can be reached if the proper stimulant is applied and that if the intensity of sound is increased the

threshold of audition is reached and the acuity of hearing is developed. To determine whether this claim had any basis the author tested out a machine on forty-eight patients. Only sixteen patients persisted in the treatment and were re-examined. In two of the sixteen the hearing was found improved and in eight it was less acute. In two, there was no change, and in four the results were doubtful. The percentage of cases with improvement is no greater than that which can be obtained by any of the older methods of treatment and the improvement was equivalent to the usual benefit which comes in the early stage of treatment with a new apparatus. Whether or not this improvement is permanent, time can only tell. The percentage of patients whose hearing was worse was high, and considering the fact that most of them showed a lowering of the high tone limit, the author concludes that there is danger of permanently damaging the acoustic apparatus through prolonged irritation by the loud sounds conveyed by the machine.

### OBSTETRICS and PEDIATRICS

Edited by Carroll M. Pounders, M.D.  
532 Liberty National Building, Oklahoma City

**"Variability in weight for height in children of school age"**—Harold K. Faber, M. D., *American Journal of Diseases of Children*.

Studies were made of the heights and weights of about sixty thousand San Francisco school children. It was found that variability in weight for height in the directions of both under weight and over weight increases with age in both sexes, but there is a greater variability and a more rapid increase in variability with increasing age seen in girls. The writer believes that these differences and variations in variability are too great to be disregarded in favor of a single standard of variation such as is now in general use. There is no absolute criterion of normal nutrition based on weight, but standards may be set up which will have equal value and defined significance under different conditions of sex and age, thus perhaps eventually increasing the usefulness of weighing as an aid to diagnosis.

A table of percentages for under weight and over weight, in which age and sex are taken into account, is proposed in place of the uniform standards now in general use which disregard these modifying factors. The increased cumbersomeness thus introduced cannot be avoided if an equitable interpretation of individual deviation from standard (Baldwin-Wood) weight for height is to be made.

**"Aphasias of Childhood; Congenital word blindness and word deafness as causes of mental retardation and deviation"**—E. Bosworth McCready, M. D., *Southern Med. Journal*, Sept., 1925.

The writer believes that aphasia in varying degrees is quite common and that teachers and others should know this and modify their methods of instruction accordingly. This causes an interference with the educational progress of the child and leads to serious temperamental, character and behavior difficulties. In some of the extreme cases

the child may be thought to be defective mentally unless a careful analysis is made.

Normal or even superior intelligence may be found in children with marked language difficulties. A plea is made for a better understanding of these conditions on the part of educators and a more careful differentiation of them from cases that are actually defective mentally.

**"The treatment of Thrush with Gentian violet"**—Harold K. Faber, M. D. and Lloyd B. Dickey, M. D., San Francisco, *Clinical notes, suggestions, and new instruments*—*Journal A. M. A.* Sept. 19, 1925.

Applications of 1% aqueous solution of Gentian violet without supplementary washes or other treatment, were used on fifteen cases. The solution was painted on the tongue, gums, hard palate and cheeks not oftener than once a day, excepting in one case. The treatments were given half way between feedings. In four cases only one application was given; in five cases two applications, in five cases three applications, and in one case nine applications. Fifty per cent. of the cases showed an apparent cure in one day or less; thirty-six per cent in from two to three days; fourteen per cent in from four to five days. In three cases the lesions returned but again disappeared after one application. The only untoward effects noted was moderate regurgitation of food noticed once in one case following treatment. Prophylactic treatment was given to nine uninfected infants during the epidemic, none of whom acquired the disease.

The writers merely recommend the dye for further trial and study as a local antiseptic in the treatment of thrush and as a prophylactic against this infection in the presence of an epidemic.

**"Stammering and stuttering from the Medical Viewpoint"**—May Kirk Scripture, B. A., and John A. Glassburg, M. D. *Archives of Pediatrics*, Aug., 1925.

The paper is summarized as follows: The treatment of speech disorders is primarily a medical problem and then an educational one. The best form of therapy is that under a medical speech specialist well versed in neuropsychiatry, psychology, rhinolaryngology and phonetics. Many behavioristic attitudes are caused by speech disorders. Among them are mental retardation, feeble-mindedness, inferiority complexes, shut in personalities, shyness, timidity, maladjustment, suicidal tendencies, emotional instability, criminality, and other antisocial characteristics. Stuttering and stammering are distinct speech defects. The former is difficult speech and the latter incorrect speech or mispronunciation.

The cause of stuttering is subject to much controversy. We find it to be an underlying neuropathic predisposition and exciting cause which is in the nature of a nervous shock.

Stammering is for the most part a speech disorder due to a rhinolaryngological defect, which may be adenoids, abnormal length and thickness of the uvula, abnormal size and tumors of the tongue, hemiatrophy of the tongue, cleft palate, hare lip, deformities of the jaws, improper development of the palatal arch, intranasal obstruction, tongue tie or defective hearing.



## ORTHOPAEDIC SURGERY

Edited by Earl D. McBride, M. D.  
1006 First Nat'l Bank Bldg., Oklahoma City

**"Three cases of fracture of the patella, each requiring a different form of treatment."**

Mrs. C. F. M., white woman, age 23, referred by Dr. Coldiron of Perry, Oklahoma, admitted to St. Anthony Hospital, November 29th, 1922.

**HISTORY:** Her immediate symptoms were inability to straighten her knee because of pain, stiffness, and swelling. She stated that six weeks ago, she fell and that her knee-cap seemed to get out of place and she could not straighten her knee. She further explains that she has fallen many times because it seemed like her knee-cap would slip out of place. It was never so serious however, previous to the last accident.

**EXAMINATION:** On examination, we find that the right knee is permanently flexed at almost a right angle and that the patient is walking on crutches. It is greatly swollen and very tender. It is impossible to palpate the patella or outline the joint borders because of the swelling and tenderness.

**X-RAY:** X-Ray shows fracture of the patella in the lower one-third. The distal fragment appears irregular as if it was a malformation of some kind. There are several loose bodies in the popliteal space. The joint surfaces appear normal.

**TREATMENT:** On November 29th, 1922, the patient was anesthetized and the knee manipulated. It was straightened to within ten degrees of full extension after a considerable force. An incision was made lengthwise over the patella with the intention of reducing the fragments. Exploration of the fragments, however, revealed that the distal fragment consisted of soft spongy bone the size of a walnut, whereas the proximal fragment consisted of apparently normal bone and also seemed to conform to the natural contour of the patella. The lower fragment was therefore removed and the wound closed.

The loose bodies of the popliteal space were not removed. The posterior plaster splint was applied which remained on for about two weeks, after which movement was started.

The end result in this case was very poor in that the right leg remained permanently flexed at about ten degrees with very little motion. Case 2.

D. W., age 28, white, single, admitted to Oklahoma Baptist Hospital, July, 1923.

**HISTORY:** Fell from a horse five days previous to admission.

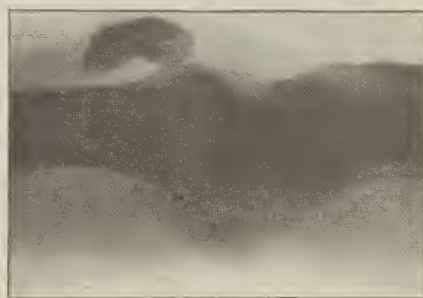
**X-RAY:** X-Ray revealed fracture of the left patella and a great deal of infiltration of the knee-joint occurred immediately.

**TREATMENT:** An incision two inches long was made lengthwise over the patella in the mid-line and fragments exposed. Eight to ten ounces of blood clot were removed. Fragments were brought together and double strand of chromic No. 2 catgut was sutured through the patella ligament at the outer and inner side of the external surfaces of the patella. A posterior splint was applied and movement begun on the tenth day.



**FRACTURE OF PATELLA AFTER ATTEMPTED REDUCTION WITH ADHESIVE PLASTER**

Ultimate result bony union, perfect function, complete recovery.



**BONY UNION AFTER TREATMENT BY OPEN OPERATION.**

E. B. C., white man, age 40, single, salesman.

**HISTORY:** Was in auto accident and struck his knee against pavement. He was seen by three doctors who examined his knee and informed him that he was suffering from a simple bruise. His knee became quite swollen but there was no pain and he did not attempt to walk without support or crutch. He was admitted to the clinic six weeks later complaining of swelling of his knee and stiffness.

**EXAMINATION:** Examination revealed a marked synovitis of the left knee joint with some tenderness about the patella but no limitation of motion and abnormal contour of the patella could be made out.

**X-RAY:** X-Ray revealed a fracture through the lower third of the patella with very little separation of fragments.

**TREATMENT:** The knee joint was strapped and physio-therapy, consisting of hot air, baking, and radiant light soon reduced the synovitis within a period of ten days and the patient seemed fully recovered.

**DISCUSSION:** Fracture of the patella at first thought seems a comparatively insignificant injury. When one reads in the text books on fractures how the patella should be treated he should not forget that his case is quite likely to be entirely different from what the author had in mind when he advised certain measures in his text book. Treatment therefore calls for ingenuity.

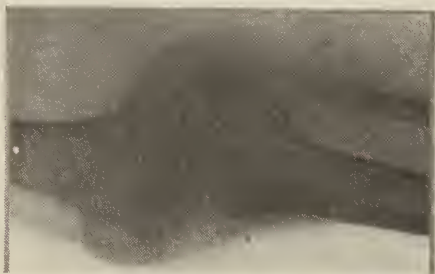
In the first place a lateral X-Ray is of course very important in the diagnosis. Case No. 3 was caused a great deal of embarrassment and financial loss because three physicians advised him to

settle with a claim agent for a very small sum, not realizing of course, that there was any bony injury.



FRACTURE OF ABNORMAL PATELLA  
LOCKING THE KNEE-JOINT ACTION.

In the second place, adhesive plaster strapping should not be relied upon if it is convenient to perform an operation so as to relieve the blood clot and completely reduce the fragments.



AFTER OPERATION AND REMOVAL OF AB-  
NORMAL PORTION OF PATELLA.

Fibrous union is very common following closed reduction because of inter-position of bundles of fascia between the fragments. I do not believe that an open operation should be performed under any circumstances unless it is possible to secure complete asepsis and trained assistance. The non-operative treatment, even though fibrous union is obtained will give satisfactory results in most cases but permanent weakness of the quad-ricaps tendon is very apt to occur.

#### 1. OSTEOMYELITIS. Osteomyelitis in Children Carl C. Chatterton, Minnesota Medicine, Feb- ruary, 1925, p. 91.

This paper concerns itself principally with the pathology of acute osteomyelitis in children. Destruction is believed to depend principally upon

the type and virulence of the infection, and to a lesser extent upon the condition and anatomic shape of the bone. The types of infection met with in this condition are the staphylococcus aureus, staphylococcus albus, pneumococcus, and occasionally bacillus infections such as typhoid bacillus.

From the roentgenograms the author finds a striking similarity in the untreated cases of bone infections in children, the progress and destruction being practically always near the epiphyseal line, the subsequent damage due to circulatory changes, edema and products of bacterial activity.

Diagnosis and treatment are briefly discussed, and early drainage urged. The author recognizes the necessity of hospitalization when irrigation treatment is to be successful. In the later stages, when sequestration has occurred, radical operation is advised. The prevention of deformity by traction and splinting in all acute cases is emphasized.

The author's conclusions are:

Acute infective osteomyelitis is essentially a disease of childhood and adolescence. It is absolutely a surgical condition. The power of bone regeneration in children is almost marvelous. Early and correct diagnosis for ideal treatment is essential. Early wide open, complete drainage near the end of the bone is the successful method of treatment.

The article is well illustrated with nine illustrations.

#### 2. Vertical Extension of the Lower Extremity in Acute Osteo-Articular Affections of the Hip. Curtillet and Tiller. *Journal de Chir.*, 1925, 25, 524.

In osteomyelitis or purulent arthritis of the hip, the authors find that vertical traction of the affected extremity gives adequate drainage, cleanliness, and comfort to the patient. To prevent ankylosis in a position of 90 degrees flexion the extremity is lowered as soon as the wound is clean. They report eight cases of acute hips in which the treatment was used. All were cured in a remarkably short time except one patient who refused to continue treatment and died out of the hospital.

#### 3. Arthroplasty of the Knee. Cuneo. *Bulletins et Memoirs de la Societe Nationale de Chirurgie*, March 7, 1925, p. 240.

In judging results of arthroplasty the nature of the lesion for which the operation was done should be given due consideration. The type of ankylosis fibrous or bony, the angle of the joint, the periarticular lesions, the contractures of ligaments, are all matters of great importance.

In bad cases it may be necessary to cut the lateral ligaments and the crucial ligaments. This of course might cause lateral instability, but to guard against such a condition a projection should be preserved on the tibia to fit into a groove between the femoral condyles.

The author uses Putti's technique, including a free piece of fascia lata to cover the condyles. The prominent curve of the condyles is reduced somewhat in front and the patella is shaved down a little thinner in order to insure better function.

After-treatment is most important. The psychology of the patient, his willingness to co-operate and ability to stand the pain of motion, all are factors of success.



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## SOME OBSERVATIONS ON THE DIAGNOSIS AND TREATMENT OF MAXILLARY SINUSITIS\*

W. E. DIXON, M.D., F.A.C.S.  
OKLAHOMA CITY.

This article is based upon one hundred cases of maxillary sinusitis taken at random from my office file.

Three were vaso-motor rhinitis cases, ten were vacuum antrum headache cases; two were atrophic rhinitis cases with ozena. Operation was made in fourteen per cent, and seventy-three were acute, subacute and chronic infections. Patients ranged in age from six to sixty-five years. Fourteen per cent had antrum infections on both sides. Two of the operative cases returned later for treatment, although they had been cured four and five years respectively; one with an acute maxillary sinusitis on the same side that had previously been operated upon, the other with an acute maxillary sinusitis on both sides.

Since writing a paper on this subject in 1918, the author has been impressed with the prevalence of maxillary sinusitis. It is very common in all seasons of the year and in all climates.

It is first seen by the general practitioner, who seldom recognizes it, as the symptoms in no respect point to sinus infection. The specialists as a general rule do not see these cases until they are far advanced and in a chronic state. The patients seek relief from a so called catarrh or headache that they attribute to eye strain. They are perhaps sent to a specialist for relief of foci of infection causing rheumatism, eye condition, or sent by the skin specialist to locate the foci of infection which causes lupus, likus, planus, dermatitis, herpiformis, peripura, erythematosis and herpes zoster. No age is immune. It seems to be as prevalent in

childhood as in middle life. Maxillary sinusitis in my experience is much more frequent than sinusitis of any other sinus.

Dental infections are thought by many writers to be the most frequent cause of maxillary sinusitis, some put it at a hundred per cent. Skillern, the most conservative, places dental infection at twenty per cent. It is my opinion that even Skillern's estimate is far too high.

In only two of the above cases could the cause be traced to dental origin, but as the teeth had been pulled, leaving a sinus draining in the mouth, there was a question whether the sinus was infected at the time the tooth was pulled or whether it existed previously. Both cases were cured by irrigation of the antrum before an attempt was made to close the opening into the mouth.

### DIAGNOSIS

Infections of the nose and throat, especially from swimming pools, and following influenza, measles, scarlet fever, typhoid fever, colds and acute coryza, are the chief causes of maxillary sinusitis. Usually during attacks of colds, patients will be seized with the antrum headache. This may persist indefinitely or clear up of its own accord after drainage is established by the subsidence of inflammation and swelling of the nose.

Patients suffering from maxillary sinusitis are always subject to frequent colds.

Nowhere in the realm of medicine is an accurate history as important as in the diagnosis of maxillary sinusitis. A good history will bring out one of two things, pain or pus. Experience has demonstrated that in all cases of acute maxillary sinusitis as well as vacuum antrum headache, the patient complains of a distinct pain which is pathognomonic of the disease. If this peculiar antrum headache is studied, a diagnosis can invariably be made or at least lead to the investigation of the sinuses.

Many have written about the frontal headache in antrum infections, but I doubt if its importance as a diagnostic aid has

\*Read before the Section on Eye, Ear, Nose and Throat, Annual Meeting, Oklahoma State Medical Association, Tulsa, May 12, 13, 14, 1925.

been duly impressed upon the profession. In the writer's opinion, this peculiar antrum headache is far more important than the X-Ray, the transillumination, or both anterior and posterior rhinoscopy. It is for the relief of this peculiar antrum headache that the patient first consults the doctor. In chronic maxillary sinusitis, the pain or neuralgia is often present, but not so constant or severe as in acute cases. A good history will usually reveal periodic attacks of this peculiar antrum pain; however, in some cases the pain is not pathognomonic, but is most severe in the temple region.

The antrum headache is often associated with other forms of headache. For example: May 14, 1920, one of my patients came in to have her eyes tested for relief of headache of four years' duration. The pain was severe over both temples—constant, night and day. She also complained of occipital headache with the muscles of the neck sore. Anterior and posterior rhinoscopy revealed no pus in either nostril. Transillumination, negative, although the eye reflex was not as clear as normal. A diagnosis was made of indurated headache and probable eye strain. Eyes were tested May 14th and spherocylinders prescribed. Infected tonsils were removed May 15, 1920. Patient went home, to return January 31, 1921, reporting posterior headache entirely relieved, but the pain in the temples was as severe as ever. Again transillumination made, with same findings as before. Rhinoscopy revealed nothing. In spite of this, both maxillary sinuses were irrigated and a small amount of pus found in each. The irrigation was continued daily until the sinuses were clear, on February 12th. The pain was relieved after the third irrigation. In June of the same year, or four months later, the patient made a trip to Oklahoma City to express her appreciation, reporting entire relief of her headache. This case illustrates three things:

First. Constant pain in a chronic maxillary sinusitis.

Second. Association of indurated headache with antrum pain.

Third. That irrigation cured a chronic sinusitis of four years standing without operation.

#### VACUUM ANTRUM HEADACHE

Vacuum antrum headache is the same headache complained of in acute and chronic maxillary sinusitis. So far as I

know, there is no other way of making a diagnosis of vacuum sinus headache other than this pathognomonic antrum headache. Transillumination and X-Ray negative. No pus was found in any of my cases.

My first case of vacuum antrum headache, in June, 1918, was very interesting and instructive. The patient gave a history of constant antrum headache of two years' standing, so severe that she was taking sedatives to make her sleep. She was weak, emaciated, nervous and anæmic. Rhinoscopy anterior and posterior revealed nothing. Transillumination was neither positive or negative, in that the pupillary reflex was not distinct, nor was the antrum area as clear as normal. Irrigation showed no pus, nor could any pus be found in either nostril by means of the nasopharyngoscope. We were at a loss to know what caused her headache, and advised her to return on the morrow for further examination. Upon her return the following morning, to our amazement she reported entire relief from all headache, and that she had slept better the previous night than she had in two years. In conversation with her physician, Dr. King, of Bristow, Oklahoma, this past summer, he told us that she had been entirely relieved of her headache and that it had not returned.

In some cases the vacuum antrum headache is most severe over the temples, as in chronic maxillary sinusitis. The patients invariably complain that constant use of the eyes increases their headache. In Dr. Sluder's book entitled, "Concerning Some Headaches and Eye Disorders of Nasal Origin", he gives a chapter on vacuum frontal headaches with eye symptoms only, and describes it as follows: "A low grade unending headache is established by the closing of the frontal sinus without nasal symptoms or signs, i.e., obstruction or secretion. Is made worse by use of the eyes." Again he says, "clinically, the headache is frontal but rarely may be referred to the external angular process of the frontal bone". Again he says, "the frontal sinus is most frequently involved in ninety-nine per cent of the cases and that the prognosis is difficult. The simplest treatment may be successful; other cases may be most stubborn." Personally, I have never seen a frontal sinus vacuum headache, or perhaps I had better say I have never diagnosed one.

Maxillary sinus headache begins at the junction of the eyebrow with the root of



the nose, extends over the eye to the temple and sometimes to the ear (most severe cases at the junction of the eyebrow and nose, except in chronic cases, when it appears to be most severe over the temples.) In most cases there is no pain over the antrum at all. In a few cases the pain seems to extend from the temple to the maxillary bone. In acute maxillary sinusitis, the pain is not constant. The patient may have a good night's rest and the pain come on in early morning, to last until four or five o'clock in the afternoon, and disappear; or the pain may be most severe at night with relief in the day time. With this pain, the patient has a fullness of the head. The eyes may feel sore, may have one or two degrees of fever and appear sick.

In chronic maxillary sinusitis, the most prominent symptom is pus, the patient complaining of a quantity of pus, either great or small, coming down the nasopharynx. This may be the only symptom. Pain may be entirely absent, yet in a large majority of cases, the pain is severe over the temple of the side affected. Transillumination will indicate the involvement of the maxillary sinus. Irrigation of the antrum will complete the diagnosis. X-Ray is not used as it is not dependable nor necessary. A thickened mucous membrane or thickened bone will throw a shadow, either by transillumination or X-Ray.

In the frontal sinus, the X-Ray is always indicated; first, and most important, to determine whether or not a sinus is present; second, to show a diseased sinus. In maxillary sinusitis, it is not necessary, because the maxillary sinus is always present. Irrigation will clear the diagnosis. Chronic pharyngitis or a redness back of the posterior pillar, is often present in any sinusitis. Tinnitus aurium is frequently associated with chronic maxillary sinusitis. A persistent cough or bronchitis which will not yield to medication should lead one to investigate the maxillary sinuses. In several of my cases a persistent cough cleared up while treating the maxillary sinus.

Transillumination, while not positive, greatly aids in diagnosis. It should always be considered in connection with the clinical findings. A thickened bone or a thickened mucous membrane will throw a shadow, but in the absence of pus in the nose and the antrum headache, one should not expect a maxillary sinusitis.

Latent chronic sinusitis is perhaps the hardest to diagnose, however; the patient will give a history of periodic antrum headache and frequent exacerbations with copious secretions. Examination of the throat, in most cases, will show a pharyngitis, and with naso-pharyngoscope, mucus can usually be seen in the naso-pharynx. In this class of cases transillumination is the least dependable as there is very little pus in the sinus to affect the shadow. There may be no pus to be seen by anterior rhinoscopy. Irrigation will complete the diagnosis.

#### VASO-MOTOR RHINITIS CASES.

In this series are included three vaso-motor rhinitis cases, each giving a history of sneezing in all periods of the year with no intermissions.

#### TREATMENT

The vaso-motor rhinitis cases were treated by irrigation with normal salt solution. In explanation, however, I want to say that the first case so treated was done more by accident than otherwise.

Transillumination showed a rather dull reflex and opaqueness over the antrum. Irrigation was done but no pus found. The patient was advised to return for further observation and reported that he had not sneezed during the interim. Irrigation was kept up daily for about two weeks. The patient was free of sneezing for four or five months. The other two cases were completely relieved while irrigation was kept up, but in both cases the sneezing began again in about a week. I have no explanation to make as to why a patient sensitized with some food product or pus proteid, should be entirely relieved by mere irrigation of the antrum.

#### NEEDLE PUNCTURE

There has been much discussion as to the danger of needle puncture. Several cases have been reported, but in my hands in some three thousand irrigations of the antrum, I have not seen a single bad result where water has been used.

In an antrum puncture it is not necessary to use a large trocar nor any of the so called antrum irrigators. They are all too large and clumsy. Any small, straight needle about three inches long and one and one-half millimeters thick can be introduced between the naso-antral wall and the anterior end of the inferior turbinate. It is only necessary to cocaineize this area as

there is very little pain in passing this sharp needle.

#### VACUUM ANTRUM HEADACHES

Vacuum antrum headaches were treated by irrigation, usually one treatment, a few cases, two treatments. It is surprising how quickly these cases clear up. One man, fifty years old, had vacuum antrum headache on both sides for twenty-five years and was entirely relieved by one irrigation of each sinus.

I have never operated for this headache, nor have I found it necessary. Prognosis in vacuum antrum headache is always good. I know of no work done by the rhinologist that is more satisfactory to himself or more gratifying to the patient. Again let me repeat that vacuum antrum headache is the same that is associated with all antrum cases. A knowledge of this headache by the general practitioner should ever put him on the guard as to the cause.

#### UNOPERATED CASES

The seventy-three unoperated cases were all treated by irrigation. Irrigation was kept up daily until all pus disappeared. The average number of irrigations was nine. In the real acute cases, three or four was sufficient. Headache is usually relieved after the third treatment, sometimes after the first.

#### OPERATIVE CASES

Irrigation was continued daily for ten days or two weeks; at the end of this time if there was no change in the odor, color, amount or consistency of the pus, all hope was given up of relieving the patient's condition by irrigation, and operation was advised.

#### OPERATION

Fourteen per cent were operated. All by the Canfield-Ballinger operation. This operation differs from the Canfield, in that no portion of the inferior turbinate is sacrificed, nor is the mucous membrane of the naso-antral wall preserved and turned into the antrum. Enough of bone constituting the canine fossa was removed to permit the introduction of the bone cutting forceps. The entire naso-antral wall is removed from the attachment of the inferior turbinate body to the floor, and from the naso-antral angle to the depths of the antrum behind, making an opening an inch and a half by five-eighths of an inch in size. The operation is both radical

and conservative, in that a complete inspection of the interior of the entire antrum can be made at the time of the operation or later, and that no portion of the inferior turbinate is sacrificed. After healing takes place, the naso-antral wall is restored and the antrum returns to normal. I can see no useful purpose of obstructing the growth of the naso-antral wall, leaving a large permanent opening.

In none of my cases was an inspection of the interior of the antrum made, nor was the mucous membrane curetted. No packing was used, nor have I ever found packing necessary. In several of my cases of long standing, with abundance of putrid pus, I have expected that it would be necessary to re-operate. Such has never been the case, however. I have always felt, and feel now, that perfect drainage and ventilation will cure maxillary sinusitis. I am a believer in preserving all mucous membrane and causing as little trauma in the antrum as possible. I believe it better practice to introduce a naso-pharyngoscope to inspect the interior of the antrum to find the cause of failure to heal some time later, than to traumatize the mucous membrane at the time of operation in endeavor to keep the field clear by packing and re-packing the antrum. No after treatment of any kind was used, and this is a point that I feel should be emphasized. Resolution will take place in an infected antrum whenever perfect drainage and good ventilation is established, and after-treatment, such as irrigation and medicinal application, is no more necessary than it is in ruptured appendix cases, in which after-treatment has been discarded long ago. I know of no operation done within the nose and throat when after-treatment is necessary. In fact, in most cases, it actually does harm. However, the patient is kept under constant observation until the nose is free of pus. This is more to encourage the patient than anything else. For the first week or ten days, the patient will complain of some pus in the nose. From that time on it gradually becomes less until at the end of four or five weeks it disappears entirely.

Two of my operated cases, one in 1917, the other in 1918, returned in the spring of 1922 with acute maxillary sinusitis of the same side previously operated. In both, the naso-antral wall had been entirely replaced, and the antrum needle had to be used as in unoperated cases. The fact of



their having had maxillary sinusitis did not in any way necessitate the prolongation of the treatment of the acute condition. They were both cured of their maxillary sinusitis by a few irrigations.

In children with maxillary sinusitis, the inferior turbinate is lifted upward and the entire naso-antral wall removed by a rasp with the exception of the naso-antral angle in front. No after treatment was used.

#### ATROPHIC RHINITIS CASES WITH OZENA

The first case was operated on in 1917. The patient gained seven pounds within two weeks following operation of the maxillary sinus. Later, the ethmoid and sphenoid were both operated. No after-treatment of any kind was used. Patient's recovery was complete both as to pus and the ozena.

The second patient was operated upon in 1921. Results as to maxillary sinusitis were good, but otherwise they were not satisfactory, as the pus and ozena still persist.

There is one objection to the Canfield-Ballinger operation, or any other operation yet devised for the relief of chronic maxillary sinusitis, that is, the cutting of the anterior, middle and posterior superior dental nerves and blood supply. These nerves are given off from the second division of the fifth nerve and pass through small foramen in the bone to supply the root of the teeth.

It is my belief that no portion of the naso-antral angle nor any part of the anterior wall of the maxillary bone can be removed without cutting these nerves and arteries. In the Canfield-Ballinger operation the anterior superior dental nerve, as well as the superior labial nerve, is cut, leaving a numbness of a portion of the upper lip and a dead feeling of the two incisors on the operated side. The numbness of the lip as well as the peculiar feeling of the teeth lasts for a considerable length of time. X-Ray pictures taken of several of my operated cases less than a year after operation, did not show abscesses at the roots of their teeth. I have not, however, investigated these cases long enough to know whether they are infected at a later date or not. It is always well to keep this in mind, however.

#### NASAL CONSERVATION\*

CHARLES H. HARALSON, M.D.  
TULSA.

The nose is one of the most important organs of the body, like most essential parts, its functions are complicated and indefinite, it is of importance topographically, cosmetically, and physiologically, and as we reach a higher state of civilization, its work is increased, thereby increasing its relative physiological value to the welfare of the body.

Despite the fact that the nose is classified as one of the special sense organs, its greatest claim to importance is that it forms the advance guard to the respiratory tract, and as such, too much stress cannot be placed on its preservation.

The treatment and surgery of the nasal structures has made rapid strides in the last few years, leaving a vast number of dry and atrophic noses, that can never hope for relief, this condition was unavoidable, because the actual cause and effect of nasal surgery could only be determined by clinical observation which required time and a large number of cases, before definite conclusions could be arrived at.

Air is inhaled through the vestibule, carried directly up to the ethmoid region, where it is divided by the anterior end of the middle turbinate, two-thirds passing above into the superior meatus, and the remaining third passing into the middle meatus, the back through the superior and middle meati to the fossa of Rosemueller, where it passes over the orifice of the eustachian tubes, down into the throat as prepared air, ready for ingestion in the lungs. Physiological or normal breathing is a requisite of the body because of the special functions of the nose, that are dependent on ventilation, and because of the preparation of air for the lungs.

Nasal functions dependent on ventilation are in the order of least importance: 1. Gustatory. 2. Phonation. 3. Olfactory. 4. Ventilation of middle ears, by passing over the orifice of the eustachian tubes, thereby creating a negative pressure which assists drainage and by the interchange of air helps maintain the normal pressure within the middle ear. 5. Aeration of the nasal accessory sinuses, keeping their os-

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tei patulous and the lining mucous membrane normal, so that they can perform their functions, as insulators to the brain and assist in the moistening and warming of inspired air. 6. Cleansing the air of inspired foreign material and bacteria, the cilia act as a coarse filter and remove large quantities of foreign material and bacteria from the air, these are at once coated over by secretions from the mucous and serous glands of the nasal mucous membrane, and are removed by the action of the cilia or by the sneeze reflex. Bacteria and small particles that pass through the cilia are deposited on the moist surface of the nasal mucous membrane and are enveloped in the secretion of the mucous glands, which inhibits the growth of bacteria, and lie dormant until expelled from the nose. 7. Preparation or regulation of inhaled air, this is the most important function of the nose, and is dependent on the normal spacing of all nasal parts and a normal mucous membrane, the air passes through the vestibule, up to the anterior ethmoid regions where it is divided by the anterior end of the middle turbinate, two-thirds passing above into the superior meatus, one-third below into the middle meatus, while in this area the air undergoes one of four changes: 1. Cooling of overheated air, by the shrinking of the erectile tissue, thus increasing the size of the nasal vault, it is estimated that the temperature is reduced from eight to twelve degrees. 2. Warmed by the action of the nasal accessory sinuses and the erectile tissue of the middle turbinate, the venous plexi become engorged decreasing the size of the middle and superior meati and giving off heat to the air, raising the temperature as required, from below zero to practically body temperature. 3. Drying, this is accomplished by the blanching of mucous membrane. 4. Moistening of dry air, this is accomplished by the secretion of the serous and mucous glands in the nasal mucous membrane, on very dry days it is estimated that from one to three pints of fluid are added to the inspired air by a normal mucous membrane and sinuses. The functioning nose eliminates headaches of nasal origin, decreases sinusitis, and nasal, throat, and lung infections, thereby playing a most important part in the general health.

Examination of over two thousand cases of pulmonary tuberculosis showed that 84 per cent had obstruction in the ethmoid region, ninety of these cases were corrected by operation, with no apparent bad re-

sults, but the clinical charts did show a decided improvement in from one to two months time.

The functions of the nose are dependent on proper balancing of cavities, size and position of turbinates, and a functioning mucous membrane, primarily nasal obstruction is the result of an irregular, thickened or deflected nasal septum, which encroaches on one or more of the turbinates, this causes a shrinking by a compensatory atrophy of the erectile tissue, with a decrease in the size of the turbinate, the opposite turbinate endeavors to equalize the size of the nasal chambers, by a hyperplasia first and later a hypertrophy of the erectile tissue, blocking off the opposite side of the nose, thereby limiting the inspired air to the inferior meatus and blocking or obstructing the ostia of the nasal accessory sinuses.

The erectile tissue of the nose only functions under normal conditions so that with disease or the absence of one of its turbinates the nose is unbalanced, and nature in her effort to equalize the nasal chambers makes this condition worse by hypertrophic, and later atrophic changes until nasal breathing is nothing more than tabular breathing, which carries the air directly back into the throat and lungs as inhaled, losing the protection to the sinuses, throat, and lungs.

The septum nasi being the primary cause of practically all nasal deformities should be placed in normal position first of all, if you wish to get a functioning nose, this can only be accomplished by submucous resection of the septum nasi, which if properly done will leave the chambers equally divided, from the standpoint of nasal space, but not of air space, with no loss of functional tissue except a thin line of scar tissue on the septal wall. The submucous resection does not correct the deformity, it is only a good beginning, the turbinates have to be balanced and the mucous membrane has to be stimulated or shrunk as indicated by its condition.

The turbinates are very amenable to treatment if there is no septal deformity and there are many procedures devised to correct turbinal irregularities, of which any method that will accomplish the desired result without the sacrifice of nasal tissue is satisfactory. After the bony parts of the turbinates are in position, if the air chambers are kept open, the soft tissues quickly pass through the same changes



that they had undergone because of the incroachment of the septum, except that the sides are reversed, the atrophic increasing in size and the hypertrophic decreasing to normal size. The atrophic mucous membrane is the most difficult to readjust, it is often necessary to use a bland oil spray or a soothing ointment in the nose for several years if you wish to get the maximal result.

The superior turbinate is very small and is dealt with as an extension of the posterior ethmoid cells.

The middle turbinate is the most important and should never be removed except in very narrow noses where the posterior ethmoid cells have to be exintegrated, and where it has undergone complete polypoid degeneration. The cystic turbinate can be opened at its inferior border and the cell fracturing the mesial or lateral wall as indicated by its position, or the lateral wall of the turbinate and cyst can be removed this will heal very quickly and will form a functioning turbinate because the cyst is lined with mucous membrane, consequently there is only a very thin line of raw surface. The shelf-like turbinates can be fractured at their base and placed in position, they rarely require packing. The ostei of the nasal accessory sinuses are sometimes occluded by an overhanging middle turbinate, this can be relieved by fracturing the turbinate at its base and elevating it keeping in place for four days with a small vasaline gauze pack, the packing should be changed daily.

The inferior turbinates are the largest and have more erectile tissue, which makes them more amenable to treatment. Hyperplasias of the inferior turbinate sometimes occur that cannot be relieved by local treatment, if the hyperplasia is limited to the anterior or posterior tip, it can be snared off without injury to the turbinate, if it involves the whole of the inferior border it should be shrunken down and enough of its lower border trimmed off with scissors to clear the floor of the nose, too much should not be removed because the turbinal tissue contracts much more than ordinary tissue. Hyperplasia is due to the presence of purulent secretion, and permanent relief cannot be obtained without removing the source of infection.

The inferior turbinate sometimes lies so close to the lateral wall that it obstructs the opening of the lachrimo-nasal duct, this can be relieved by fracturing it at its

base, holding it in place with a pack for 4 days. The inferior turbinate may be crushed or have a sub-periosteal resection of the bone with gratifying results, when it is not possible to shrink them down to the desired size.

Deflected septi in children, up to the age of thirteen can be molded into position with a blunt Killian elevator, no packing is required to keep in place, this procedure gives relief in a number of the lesser deformities, and is worth trying before doing a submucous resection on a child.

#### CONCLUSIONS

Nasal tissues are exceptionally resilient when balanced and aerated. Cautery in the nose gives only temporary relief and destroys tissue. Turbinectomies are so rarely indicated, that we would be better off if we did not know the technique of their removal.

Any surgical procedure that has not for its object, position with due regard for conservation of tissue, should be condemned.

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#### SALVARSAN IN THE TREATMENT OF DISEASES OF THE EYE, EAR, NOSE AND THROAT\*

J. W. ECHOLS, M.D.  
MCALESTER

In selecting this subject for my paper I am aware that it is not a new one, nor will I present to you any startling revelation on the subject. Those of you who have used it as I have, doubtless have had many wonderful results from its use.

Adhering strictly to scientific technique there would be little or no excuse for my paper, because a positive Wassermann naturally suggests the treatment; therefore my excuse for selecting this subject is the fact that the word *SALVARSAN* is so generally interpreted as *specific* when mentioned in connection with a given case. When you mention the use of Salvarsan the idea of a specific case is conveyed to the average medical man.

My use of the drug has been so promiscuous that I have really been experimenting with its use, and have been accused of it and right here I am going to plead guilty. I have tried it out upon almost

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everything that I have been called upon to treat for the last twelve years. With the fifteen thousand prisoners which I have had to look after the last few years, I have had ample opportunities to test out its good qualities.

I have been accused of becoming an enthusiast on the use of this drug, but I believe that my conclusions are conservative. The use of it in the diseases of the eye, ear, nose and throat, of course, is the subject of this paper, but should I digress a little from that limitation you may not be surprised.

When I show a case of corneal ulcer to a physician and make the remark that I gave him or her, as the case may be, *Salvarsan*, the question comes back at once. "Is it specific?" When I answer that I do not know, many of them look at me in wonderment. "Have you had a Wassermann made," is the next question, and when I also say "no" to that, then I am asked why I gave 606. The idea that it is good only for the treatment of syphilis is a prevalent one.

If I succeed in conveying the idea to the profession that *Salvarsan* is just as valuable in the treatment of hundreds of other diseased conditions as it is in the treatment of syphilis, then I shall have accomplished my aim.

I perhaps have had more Wassermans made during this year than any other man here today, and shall continue to do so. I also say that I do not wait for them before administering 606 to many of my eye and ear patients. This may seem rather haphazard to some of you, but to my notion if you wait for a positive Wassermann in every case before using the drug referred to, you will overlook a very valuable agent in many non-specific cases.

By way of digression and suggestion, try it on some case of malaria, where your intravenous quinine and other remedies have failed; of course you have used it in pellagra, but try it in incipient tuberculosis, jaundice, in young adults, in deep abscesses where the serums have failed, and other conditions too numerous to mention. Of course, it is suggested that this be done cautiously, however, I have never observed any ill effect from its administration since I began using small doses.

Now with the report of a few cases where I have used it in the treatment of diseases of the eye, ear, nose and throat, and I will be through:

#### REPORT OF CASES: EYE

My first experience with *Salvarsan* in the treatment of eye diseases was in a case of traumatic corneal ulcer which had failed to respond to the usual treatment. For two weeks the ulcer showed no signs of improvement. There was no specific history; patient in good health and I could see no reason why the eye would not heal. Mentioned 606 to the man and he became offended. After some argument I persuaded him to take a small dose of *Salvarsan*. Within three days the eye had almost healed. A Wassermann test made later came back negative.

In these reports I am omitting all the detail possible, because I know they are tiresome. The age and name of the patients, detail of history, size of dosage, etc., is unnecessary for the purpose of my paper.

Since my first experience with the above mentioned case I have used it in hundreds of cases where the usual remedies do not bring results within a reasonable time. Some of these cases have been syphilitic; most of them have not. Among the other cases treated with *Salvarsan* in small doses are iritis, interstitial keratitis, and I have had some wonderful improvement in cases of trachoma. I do not use it in all cases, but I do use it in all obstinate cases. It does not cure them all, but it is a wonderful agent when it does cure, and does it right now.

#### EAR

In the ear I have not used it so much. I have had some good results from its use in otitis media in adults. In these cases I asked for no history and had no Wassermann made. I failed to get results in about fifty per cent of these cases. I have gotten good results several times in mastoiditis, at least the tenderness disappeared. These cases were where, for some reason the patient would not or could not be operated. Anyway it is worth the notice.

#### NOSE

In cases of diseases of the nose it has been my experience that those having positive Wassermans are the only ones improved. My observation has been limited in this.

#### THROAT

I do not wait for a Wassermann in any obstinate case, before administering 606. I have them made usually for my own sat-



isfaction, but the usefulness of the drug is too well established in my mind to wait. A traveling salesman was my last observation along this line. He too, was offended and alarmed when I suggested the use of the drug for an obstinate tonsillitis in a fragment of tonsillar tissue which has been left after a tonsillectomy. He would not take it until he had had a blood test, which was negative. He had a second one made, also negative. He was newly wed and on his homeward trip to meet his bride. To say that he was alarmed is putting it mildly. He had taken treatment in transit, so to speak, the best he could do and keep traveling for his firm. He stayed with me a week and took daily treatments and did not improve at all. He finally agreed to take a dose if I thought that his throat would get so he could swallow food. I gave him a small dose and he left for his St. Louis home three days later, feeling that his new wife would be safe from infection by him.

If I had time I could report case after case of different conditions of the throat which I have treated. But case reports are boresome and statistics worse, so I will leave it with you with the admonition that if you will investigate its use you will find many places to use Salvarsan to your advantage in non-specific cases.

### SYMPATHETIC OPHTHALMIA\*

A CHRONIC INFLAMMATION, CHIEFLY OF THE UVEAL TRACT, PRECEDED BY EITHER INJURY OR DISEASE OF THE OTHER EYE. A COMPILATION.

W. M. JONES, M.D.  
TULSA

We learn from Schirmer's monograph<sup>1</sup> that Bartisch recognized in 1583, that "an injured eye may shrink and become dangerous to the other eye," but it was not until 1840 that Mackenzie<sup>2</sup> of Edinburgh gave the first detailed description of the disease and gave it the name we still use, sympathetic ophthalmia.

#### ETIOLOGY

Perhaps no field of medical research has offered greater opportunity for theorizing, and today after years of endeavor to determine the etiology, it still remains

an unsolved mystery. However, the history of this chronic inflammatory process, including its occurrence after perforating injuries, after an interval of time, after enucleation, after intraocular sarcoma where perforating injury can be ruled out, its persistence and the anatomic findings in the sympathogenic eye, are all best explained by assuming microbic life in the second eye. The fact that no specific germ has been isolated may be due to its ultra microscopic size or to its resistance to ordinary stains, and in nowise disproves its presence.

#### THEORY OF TRANSFERENCE

The theory of transference through a reflex action of the ciliary nerves was pretty generally accepted at the Heidelberg Congress in 1863, but Roemer in 1903, quite conclusively disproved this theory by showing that ciliary nerve irritation of one eye does not cause inflammation in the other.

The cytotoxic theory of Brown Pusey<sup>3</sup> based on the experiments of Castaigne and Rathery showing that when the entire pedicle of a rabbit's kidney was ligated, certain degenerative changes took place in the other kidney, yet failed to occur if the ligated kidney was promptly removed; as well as the anaphylactic theory of Elschnig<sup>4</sup> which assumes a hypersensitive condition of the second eye from absorption of the degenerated uveal tissue of the injured eye, may both be discarded because, aside from other objections, they fail to account for the persistence of the inflammation after enucleation of the primary eye.

That sympathetic inflammation results from disease or injury to the other eye is accepted as a fact, but the manner of transference has in the past afforded so many theories and each based upon such anatomic reasoning as to lead one to the conclusion that it was quite possible for the infection to have followed different paths. However, I believe it is now quite uniformly held to be by means of the general circulation.

#### ENDOGENOUS THEORY

Meller of Vienna published in the German *Archives fur Oph.* an entirely new theory. This article was translated by the writer and published in the *Annals of Ophthalmology*, July, 1911, and is very nicely summed up in the words of E. V. L. Brown as follows: "The prevailing theory has

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been that the infection entered the eye directly through the wound or other atrium from without. For this, Meller would substitute the following endogenous theory of the course of events; First, there occurs some form of damage or insult to the uveal tract, such as a penetrating wound, a toxic iridocyclitis from a necrotic sarcoma, etc., which lowers the resistance of the part; second, some other part of the body than the eye is the portal of entry for the specific organism. This organism has an elective affinity for uveal tissue and attacks that of the diseased eye because of its lowered resistance. Here it finds a favorable medium for development and at length attains sufficient virility to attack the healthy uvea of the other eye. This endogenous theory better explains the cases in which no wound of any kind can be found to have occurred."

Reports by Schirmer, Fuchs, Meller and others of sympathetic inflammation following intraocular sarcoma of the primary eye are now so numerous and well authenticated as to leave no doubt as to their credibility.

#### PATHOLOGY

Although the etiology is as yet only a theory, the pathology presents a definite specific picture.<sup>5</sup> In discussing the pathology we are visualizing the anatomic findings of the sympathogenic (primary injured) eye, yet considering a disease of the other eye. However, it is known that the same identical pathology exists in the sympathizing eye.

In brief we find a round cell infiltration within the uveal tract, nodular in character, occurring frequently along the blood vessels. There is a tendency to the formation of epithelioid and giant cells, but without caseation.<sup>6</sup> "It is very significant that the uvea between the nodes may be entirely healthy and free from infiltration. This would lead one to believe that the disease does not progress from one part of the eye to another by direct continuity of tissue, but in some other way." Later on, these nodules become fused together forming a thick infiltrate which is finally replaced by a shrunken layer of pigmented connective tissue. Meanwhile the blood vessels become obliterated by hyaloid degeneration.

It is the outer layer of the choroidea that is first involved and the process comes to full development within the choroidea, not upon its surface; a characteristic not found

in the ordinary inflammatory process. The capillary layer of the choroidea is involved late, after the process has come to a full expression.

This sympathetic process is really a granulomatous infiltration inside the uvea, chronic in character, "resembling closely syphilitic and tuberculous uveitis but lacks necrosis and caseation, and does not quickly extend beyond the confines of the uvea,"

<sup>7</sup> Where the infiltration occurs around and extends along the blood vessels it frequently penetrates and is seen outside—external to the sclera.

The infiltration is more diffuse in the iris and ciliary body than in the choroidea; this is perhaps due to fusing of the smaller nodules. The lens frequently becomes opaque and is more or less surrounded by a fibrinoplastic exudate that binds the entire posterior surface of the iris to the lens capsule.<sup>8</sup> The vitreous is involved early and is largely destroyed. The retina is free from infiltration except along the blood vessels, yet as a result of the destruction of the choroidea and vitreous it becomes detached, atrophied and entirely disorganized. A slight diffuse infiltration occurs in the end of the optic nerve, diminishing as the distance from the papilla increases.

As proof of the agreement between clinical and pathological findings, Fuchs studied 200 enucleated eyes and without knowing the histories selected 29 about which he felt safe to say, "These are sympathogenic—have caused sympathetic ophthalmia." He was in error in only one case.

#### BLOOD PICTURE

In his study of the blood in these cases Cecil-Price-Jones,<sup>9</sup> found what he termed a "Mononucleosis." In nine cases studied the large monos were increased 170 per cent. While others admit the possibility of the above findings, they found cases with no increase, or even with a decrease in mononuclears.

Gifford found an increased leucocytosis in vernal catarrh, corneal abscess and even in normal health; hence, the blood picture is of no value in determining the pathogenesis or treatment.

#### IRRITATION VS. INFLAMMATION

As first pointed out by Donders<sup>10</sup> there is a "sharp and radical distinction between sympathetic irritation and sympathetic ophthalmia." The former is pure-



ly reflex in nature, causing photophobia lachrymation and transient amblyopia and never produces the latter. Again enucleation provides a prompt, definite cure in the former while in the latter immediate improvement is apt to be negligible.

#### CLINICAL FINDINGS

To make a diagnosis is no easy task for "there is nothing in the appearance of the second eye in sympathetic inflammation that is absolutely diagnostic, yet certain findings occur with great frequency."<sup>11</sup>

The patient complains of dimness of vision but very little pain. There is early a circumcorneal congestion with fine deposits of cells and pigment on the posterior surface of the cornea. The delicate surface outline of the iris is blurred and iritic adhesions to the lens occur promptly. If examined before the fine vitreous opacities obscure the fundus a mild papilloretinitis may be seen.

Later, as the inflammation continues the deposits increase, the iris thickens, the posterior synechia increase involving the entire posterior surface of the iris, producing a retraction of the iris root, while yellowish nodules and new formed blood vessels may be seen on its surface.

#### COURSE OF DISEASE

The above process may continue for years with remissions and recurrences; the anterior chamber becoming shallow, the pupil occluded with a fibrino-plastic exudate, the lens opaque, resulting in either a blind glaucomatous or shrunken eye. On the other hand, should the inflammation be controlled promptly there may be seen yellowish, sharply defined non-pigmented nodules which are pathognomonic. These nodules do not involve the macular region and vision may be retained to a surprising degree.

In considering any case of uveitis that gives a history of injury or intra-ocular growth of the other eye, one must eliminate such possible etiological factors as tuberculosis, syphilis, auto intoxication and focal infections.

However, since their presence does not rule out a sympathetic inflammation, it is much safer to institute appropriate treatment at once and eliminate later. For until we are enabled to isolate a specific organism, establish a definite reaction, or recognize clinically a characteristic inflammation, a definite diagnosis can be based

only upon the anatomic findings of the primary eye.

#### CONTRIBUTING FACTORS

Trauma to the iris and ciliary body, whether from accident, operative procedure, or perforating ulcer, is an important causative factor. A few cases following nonperforating injuries and an even greater number following intraocular sarcoma have been reported.<sup>12</sup>

Since iris and ciliary body injuries are the ones most apt to cause sympathetic inflammation, they should be handled most skillfully, every effort being made to prevent infection and to free the iris from the corneal wound, or where the extent or location of the wound makes this impossible, to draw the conjunctiva over the wound and exposed uveal tissue.

Following extensive injuries it is much safer to use heroic medical measures to prevent sympathetic inflammation than to try to combat it after it has developed.

Retention of foreign bodies within the eye are indeed of serious import, yet they are dangerous only in so far as they tend to keep up the inflammation; nor does removal of the foreign body eliminate the danger.

The time interval following the injury is important. Most cases occur within from four to eight weeks, yet Weeks reported a case occurring 42 years, and Knapp a case 45 years, after injury. It is generally conceded that an injured eye that has been free from inflammation for several months or a year is not apt to cause sympathetic inflammation in the other eye, yet we must not forget the fact that an active inflammatory process may exist in the deeper part of the uvea with no external evidence of disease.

#### PROPHYLAXIS

Of all the various operations devised as prophylactic measures, only enucleation and evisceration are worthy our consideration. In the case of an injured eye, blind for weeks or months, there may be present a sympathetic infiltration that has extended along the blood vessels beyond the confines of the sclera. Evisceration in this case would remove only the major part of the pathology that is known to precede sympathetic inflammation in the second eye.

Mules evisceration operation, while producing a better slump, is followed by more

reaction, even by an occasional sluffing of the sclera in elderly patients, and except where done immediately following the injury is on theoretical grounds at least, a procedure fraught with much danger. Enucleation is quite generally accepted as the safer operation, yet it must be remembered that sympathetic ophthalmia has occurred after both. The English committee on this subject found that enucleation seemed to be no safer than evisceration or Mules operation.<sup>13</sup>

Schieck reports 80 cases following enucleation, occurring within from 24 hours to 21 years, and shows that the severity bears no relation to the time interval. From the late war case histories, Morax has collected 39 cases, all of which followed enucleation and 2, evisceration. This is quite a contrast to earlier observations.

The factor of safety as regards the choice of operation is relative, yet definite as regards time, since sympathetic inflammation rarely if ever occurs before 14 days.

The removal of all foci of infection is a matter that must not be neglected if we would give our patient the full benefit of our present day knowledge. E. V. L. Brown reports definite improvement in a case of sympathetic ophthalmia from the removal of infected tonsils.<sup>14</sup>

#### TREATMENT

Where sympathetic inflammation has been fully established in the second eye, treatment may be outlined as follows: Prompt enucleation of the sympathogenic eye, if blind; atropin, augmented if need be with cocain and adrenalin; sodium salicylate in maximum doses; inunctions of mercury and regulation of the bowels.

Sodium salicylate, atophan, aspirin, and benzosalin are of equal efficiency, the dosage is the all important thing. Many other drugs have been recommended, but the salicylate treatment of Gifford has many adherents and in the hands of the writer has given very satisfactory results.

One grain a day per pound of body weight is the amount usually given, although in very obstinate cases it may be increased to double that amount. A patient weighing 180 pounds will take 15 grs. with an equal amount of common baking soda in a glass of hot water or essence of pepsin, four times the first day; 30 grains per dose the second day and 45 grains per dose thereafter, with no inconvenience except tinitis, slight deafness and profuse

perspiration. Should delirium develop, atophan may be substituted. This is equally hard on the digestion but does not cause the same amount of head symptoms nor perspiration.

The patient should remain in bed in the afternoon and be careful not to catch cold.

After the inflammation is under control, full doses may be given four days a week, with one-half doses the other three days.

After the inflammation has been absent for three weeks, three-fourth doses may be given three days a week for three months.

Mercury inunctions are given daily one week in three. Optical iridectomy should be delayed for a year after the inflammation has subsided. Even where there is an increased tension operative procedure should be delayed as long as possible.

#### PROGNOSIS

Prognosis depends largely upon the time when the patient comes under treatment.

Morax attributes war time successes to the use of neosalvarsan, and reports 39 cases, with 14 bad and 25 good results. In contrast, Gifford in 1910 reported 16 cases with only 2 bad, 1 medium, 1 good and 12 very good results; vision 6/9 to 6/6. Gifford states that probably 75 per cent of all cases will retain useful vision if seen within the first week.

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#### FOREIGN BODY IN EYE: REPORT OF TWO CASES\*

F. R. VIEREGG, M.D.  
OKLAHOMA CITY

For your consideration today I want to bring to your attention two case histories. These cases both effectively illustrate the need of a careful examination in every

\* Read before the Section on Eye, Ear, Nose and Throat, Annual Meeting, Oklahoma State Medical Association, Tulsa, May 12, 13, 14, 1925.



case of eye injury. This is true no matter how trivial the complaint of the patient may be.

It is very easy for a good man with a large practice to overlook small holes in a cornea, especially if the patient casually presents himself, complaining but little. It is to this type of case especially that I want to draw your attention by presenting these two cases.

Case 1—C. H. W., a healthy adult male, apparently thirty to thirty-five years of age, came to our office January 25, 1925. His chief complaint was of failing vision and the sensation of a fog coming over his left eye. After a rather casual examination I found at the outer margin of the cornea, at about four o'clock, a small white scar. This scar was about 1 mm. long and of a hair's breadth.

The anterior chamber presented no pathology; there were no formed elements, and the chamber was of the same depth throughout.

The iris, normally of a blue color, was of a lighter shade in the left eye, and had a greenish sort of a cast.

The lens was clear throughout its entirety, so far as we were able to determine. The vitreous was clear.

The fundus examination revealed a whitish spot to the outer lower quadrant of the macular region. This spot began about two nerve head widths from the edge of the papilla and extended upward and outward for a distance the diameter of the nerve head. Its width was about one-third of the diameter of the nerve head. The spot appeared to be an exudate for it completely masked the fundus details in the region involved.

After finding these things in the cornea and fundus, we elicited the history that seven months previously, while hammering on a bit, something flew in his eye. There was but slight inflammation of the eye at the time, but it persisted several weeks, which would be far too long for an injury that involved no more than he was told this involved. He visited one of the good men out in the state, and was told that there was nothing much the matter with his eye, just a slight abrasion of the cornea. After the inflammation persisted for several weeks he became suspicious and went to Oklahoma City. There he saw several good men. The first man told him there was nothing in the eye. The second

reported he thought there was something in the eye, but did not push the matter very strongly and let it drop. Then two or three months later he came to our office complaining of failing vision in the eye.

After obtaining the above history, I again went over his eye, and this time I found a hole in the iris, immediately behind the corneal scar. The first time I went over the eye I took this hole to be one of the pigment lined crypts of the iris, but it was too conveniently located to be that. His vision at this time was recorded to be: right 20/15, left 20/40-1. At this time we took this diminution of vision to mean a degeneration of the eye due to the siderosis.

The pupil was dilated and the eye was repeatedly exposed to the giant magnet. This gave the characteristic pulling pain that is elicited when a magnet pulls a piece of steel in an eye. Other than the pain, there was no evidence that the piece of steel had moved any.

This manipulation, however, set up a beautiful (so to speak) iritis which persisted in spite of all our atropine, for about ten days. After the inflammation had all cleared up, the pupil was still widely dilated, we decided to test the eye. Much to our amazement and contrary to our expectation, we found that a —50 sphere, combined with a —50 cylinder axis 165 improved his vision from 20/40 to 20/15. We promptly fitted him with this correction.

Then the question naturally presented itself as to how much of this poor vision was present before the injury. It was very evident that it was not due to the siderosis, for that cannot be improved by lenses. We all know that it is possible for that much error of refraction to be present for a great many years and the patient be unaware of it, until something like this happens to call his attention to the eye.

This patient has not since presented himself for observation, so I am unable to say as to his exact condition at the present time. But from all appearances the foreign body is thoroughly encapsulated and if that is true it may not cause any further trouble. But you all know that a foreign body remaining in the eye is a constant source of danger and often results in a degeneration of the eye. But since we were not able to move this body by the magnet and it is certain that any mechanical manipulation would surely result in a loss of the eye, because of its

location in the macular region, hopes of removal had to be abandoned. This would have been one case that had the magnet been used early the chances would have been excellent, the foreign body would have been removed, the vision unimpaired, and the chance of loss of the eye reduced to a minimum.

Case II—The second case was similar in all respects excepts results. This man, J. H., came to our office February 6, 1925, while the first patient was still under observation. These two cases being under observation at the same time is probably the reason that I remember them so well. He came to our office and wanted to know why his eye did not "clear up". He gave the history that three weeks previously, while running a pipe machine, he got some "oil in his eye." To this apparently trifling injury, he paid little attention. He told me that it smarted and burned a little, but he kept on working until quitting time. After he ate his dinner, he went to see his family physician, who told him there was nothing in his eye. Three days later, because the inflammation in his eye persisted, he went to see an eye specialist. This man examined the eye and told him that some foreign body had struck his eye and caused an abrasion of the cornea and then bounced off. The inflammation persisted and three weeks later he came to our office.

I immediately took his vision and found it 20/200 in the right eye. On examination I found a mild inflammation and a low grade iritis. At the top edge of the pupillary space about 11 o'clock I found a corneal scar about 1 or 2 mm. long and of a hair's breadth. The anterior chamber was clear and of the same depth throughout. In the lense immediately behind the scar and extending about half way across the pupillary space was an opacity. This cataract involved about the anterior half of the lense. There was no spot in this opacity that could be identified as a foreign body. But we thought that it was highly improbable that a foreign body should make such a small hole, penetrate so deeply and still bounce off the eye and not have the patient know that something had struck him in the eye. Furthermore, why should such a small corneal wound cause such a persistent inflammation if the foreign body was not still in the eye.

We could find nothing in the fundus, either in the form of a foreign body, scar or exudate. The pupil was dilated and the

eye was repeatedly exposed to the giant magnet. This procedure elicited the characteristic pulling pain. No movement of the foreign body was observed however. The pain excited by the pull of the magnet kept getting worse and a deep pericorneal injection quickly developed, while the pain gradually increased. Because of the pain and the pericorneal injection, and also because the iritis was so persistent in the previous case we immediately instilled atropine solution and put the patient in the hospital.

The next morning the pain was still present but the pupil remained dilated. That morning Dr. McHenry thought the cataract had a changed appearance, so fortunately we decided to try the magnet again. This time after several exposures from different angles the piece of steel was dislodged into the anterior chamber. The steel was thin and flat and of a nearly circular contour and about 1 mm. in diameter. This was then removed through a peripheral incision in the cornea. The eye was treated antiseptically and much atropine ointment instilled into the eye. The eye was bandaged and the patient put to bed in the hospital.

His iritis continued merrily in spite of powdered atropine and so forth for the next two weeks. At this time we could not see that the cataract had extended any. The corneal wound was healed and the inflammation all subsided so the patient was discharged and asked to return in a couple months. His vision was 20/200 however.

Two months later the patient returned as per request for observation. At this time it was found that if he would direct his line of vision to one side of the chart he could make out letters in the fifty foot line. This was such a slow process, however, that it could not be considered an industrially useful eye. He thought a plus 75 sphere combined with a plus 50 cylinder axis 60 helped, but it did not improve his vision any. The cataract had neither absorbed nor extended any. It still extended over half way across the pupillary space. The peripheral portions of the lense were clear and the fundus was free from any pathology.

From this fact he was advised that an optical iridectomy extending towards the inner canthus would in time give him binocular vision and would so improve his vision that he would not have more than a 25 per cent loss. He was also told that



about 80 per cent of the operations are successful.

Again at this time I want to call your attention to the fact that this foreign body was released from the lense in this eye only after exposure to the magnet the second time and this after there was a well developed iritis. This is the first time I have known of a foreign body to be removed on the second exposure and that after the development of a severe iritis. Whether the development of the inflammation rendering the tissue more succulent had anything to do with these facts or not, I am unable to say, but it looks reasonable.

These two cases closely simulate each other in that they both had a penetrating wound of the cornea, which inconvenienced the patient but very little immediately following the injury. In both cases the foreign body remained in the eye, and in each case a severe iritis developed following the use of the magnet.

There is no doubt that in each case, had the patients complained more bitterly, the first men on the job would have correctly diagnosed the condition. In the first case this neglect might yet mean a serious loss, but in the second case it would have had the same result for the cataract was formed when the foreign body entered the eye. We all make these hasty, careless diagnoses in our rush periods. But I am presenting these apparently trivial cases as a plea for more careful, painstaking work in this class of cases.

#### PULMONARY IMMUNIZATION.

Certain tests made by W. H. Manwarning, Francis I. O'Neill, Kenneth W. Thompson and Leonard G. Dobson, Stanford University, Calif. (Journal A. M. A., Nov. 28, 1925), with actively and passively immunized lungs, give a conception of immunologic adaptation of fixed tissues not in accord with current views. They indicate the removal or the masking of the preliminary fixed tissue hypersensitiveness, the development of fixed tissue resistances that in themselves would fully account for immunity, unassisted by circulating antibodies. As the lungs of passively and of actively immunized dogs are apparently identical in these tests, the tests give no evidence that any tissue represented in the lungs acquires properties during active immunization that cannot be accounted for by the local absorption or fixation of circulating antibodies. The experiments, therefore, give no support to the current hypothesis that the main or sole site of antibody formation is in the reticulo-endothelial system. They do not, however, rule out the possibility of antibody formation by this system.

#### OKLAHOMA LABORATORY GETS FEDERAL RECOGNITION

We are advised that the Medical Arts Laboratory, of Oklahoma City, achieved a goal it had been striving for for several years, Federal license to manufacture and sell anti-rabic vaccine anywhere in the United States.

This is a great honor, as there are but 98 licenses of this kind in the country, and none in Oklahoma with the exception of that of the Medical Arts Laboratory. The inspection upon which the license was issued, was personally conducted by Dr. G. W. McCoy, Director of the Hygienic Laboratory, Washington, D. C.

#### GLAND THERAPY.

Some medicaments can be assayed, and thus standardized, by chemical means—such as belladonna, cinchona, hydrastis, nux vomica, etc.; others by physiological methods, as ergot, digitalis, aconite, convallaria, etc.; but now that gland products are coming into such extensive use, how is the physician to be assured of their activity?

Some of them, it is true are tested by chemical or physiological means, for example desiccated thyroid, adrenalin, and pituitrin; but for the majority there is no assurance beyond the care of the manufacturer in handling the fresh glands and applying suitable methods of desiccation or extraction. The hormones must be preserved; otherwise the gland product is simply so much protein. Here if anywhere the reputation of the manufacturer is a matter of prime importance. Physicians who are particularly interested in gland therapy should read what Parke, Davis & Co. have to say, in their advertisement in this issue about their methods of manufacture.

#### THE CUTANEOUS NEUROSES.

Joseph V. Klauder, Philadelphia (Journal A. M. A., November 28, 1925), stresses the fact that the psychologic phase of certain skin diseases should not be neglected in treatment. The application of medical psychology may be of considerable value in the treatment of certain skin diseases, objectively as well as subjectively manifested. A psychic cause of such common skin diseases as pruritis and urticaria should be included among the many causes of these diseases, although textbooks on dermatology make little or no mention of a psychic cause of pruritis and no mention of psychotherapy in these diseases. Klauder discusses the role of suggestion in the causation of cutaneous phenomena and cites cases of psychogenic types of pruritus and urticaria and other skin phenomena following psychic disturbances, such as the dermatophobias—acarophobia, rupophobia, bromidrosiphobia, trichotillomania and dermatothlasis.

# THE JOURNAL

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DR. CLAUDE A. THOMPSON.....Editor-in-Chief  
Barnes Building, Muskogee, Okla.

DR. P. P. NESBITT.....Associate Editor  
814 Surety Building, Muskogee, Okla.

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Failure to receive the Journal should call for immediate notification of the editor, Barnes Building, Muskogee, Oklahoma.

Local news of possible interest to the medical profession, notes on removals, changes in address, deaths and weddings will be gratefully received.

Advertising of articles, drugs or compounds unapproved by the Council on Pharmacy of the A. M. A., will not be accepted.

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### EDITORIAL

#### NOW FOR THE ANNUAL ELECTIONS

Officers and members of all county societies are reminded of the importance of prompt reorganization of their societies at this time. It should be remembered that all memberships expire December 31st, and to save the county secretary having to go to the trouble of hunting up the member, telephoning and writing him, the member should take it upon himself to remit his dues without any sort of notice.

Each society should, if possible, hold a meeting in December and elect officers for the ensuing year, as well as outline work for the future.

#### THE BUSINESS SIDE OF MEDICINE

Very few of our members realize that one of the provisions of county constitutions under the great reorganization plan adopted universally in the United States some twenty years ago, called for at least one meeting annually, at which time the material interests of the physician individually and collectively was to be the subject of conversation. The wisdom of this provision must be apparent to any one who has his ear to the rough economic ground over which the physician is now floundering. Certain but sure encroachments are being made upon the medical income from many directions, principal of which is the physician's own immeasurable stride toward the curbing and lessening of disease. The physician's activity in furthering quasi State Medicine has in many instances swung the pendulum entirely from his own control, where it logically should be, into channels sometimes inimical to his best interests, and probably, in the end inimical to the public interests generally. A discussion of every thing affecting the physician is certainly not out of place at this time.

#### ONE TYPE OF ENCROACHMENT ON THE PHYSICIAN'S FUNCTIONS

The Chicago Medical Society, acting through its Council, November 10th, called attention to the fact that the American Public Health Association at St. Louis, October, 1925, heard proposals to establish a doctor of Public Health (D.P.H.) in each community where a health officer is needed; noted that several institutions of learning have introduced courses whereby laymen as well as physicians may be instructed, and in comparatively short time qualify as a Doctor of Public Health; and, that in all probability in Illinois a bill to license a so-called D.P.H. will be introduced in the next legislature; the Council without dissent voiced its opposition to such measures.

It was noted that first of all Health Officials should be physicians having the proper knowledge of the sciences concerned in Public Health, that such knowledge cannot be gained by any layman in a short time; that such arrangements only entail duplication of expense upon the community, which must eventually call upon the



trained physician, and that the State confers on the M. D. the right to practise medicine and surgery in all its branches, while special licensing of a D.P.H. would take from an M. D. that right. The Council resolution condemning this move transmits its action to all State societies, the American Public Health Association, whose president is a layman, and to the institutions concerned. Oklahoman's are placed upon their guard by this action.

## ROUTINE PERIODIC EXAMINATION OF THE APPARENTLY HEALTHY

For several years it has been the policy of the American Medical Association and kindred organizations to foster movements tending to prolong and make human life more comfortable. One of the results of these endeavors has been the formation of plans for carrying out periodic examinations of the supposedly healthy person. The main features of the matter are that examinations be made at least annually—the birthday is suggested as the date most likely to be recalled by the person interested. Detailed plans have been formulated, which if followed will leave no reasonable effort overlooked to ascertain the condition of ones' health.

There are two features of the work, or problems, which must be noted and met in good faith if the work is to be of value. The physician must know his task; the layman must be taught the value of the work.

Every one knows the value of periodic checking up of human physical conditions, that is every physician should know, but many of them have never given the matter a thought. They are just here to answer calls and that ends the matter for the physician. It will require a long time to familiarize the layman with the great value of these examinations. However, it is being done well. In some sections of the country periodic examinations of the apparently healthy person are being made as a routine and they are netting the person protection and satisfaction, while the physician has his remuneration in increased income and satisfaction in having performed a sensible task in the proper manner. It is not contemplated that this work be done with a blare of trumpets and frothy publicity, but that it be made a serious part of the work of the medical profession, that the

work be done and on its completion the person examined be given a concise statement of his physical shortcomings, with recommendations as to the best course to follow in clearing up any detected deficiencies.

The American Medical Association has formulated a blank which is practical, easily followed and covers the field. It may be had on application by those interested.

### *Editorial Notes—Personal and General*

DR. JOHN S. STULTS, formerly of Olustee, has moved to Hollis.

DR. S. F. WILDMAN formerly of El Reno, has moved to 601 East 11th St., Oklahoma City.

DR. J. WORRALL HENRY, formerly of Pawnee, has moved to 727 West 17th St., Oklahoma City.

DR. ERNEST BALL, Antlers, returned recently with his family, after having spent a 6 weeks' trip visiting Honduras, Nicaragua, and other Central American countries.

DR. CLAUDE A. THOMPSON, Muskogee, was honored by a surprise birthday dinner on November 23rd, at the Severs Hotel, more than forty of his friends being present.

UNIVERSITY OF OKLAHOMA opened its newly completed Medical Building on November 23rd, at Norman, with a distinguished assemblage of guests, attending the exercises.

DR. J. E. ARRINGTON, Frederick, narrowly escaped serious injury last month when his car collided with a Ford truck, the doctor receiving a broken rib and a number of painful cuts.

DR. JOHN C. DOVELL, Paden, sailed November 19th, from New York, for the Belgian Congo, Africa, via Brussels, on the S. S. Zeeland, to assume a position as medical missionary in charge of the hospital at Wembo Nyanna for the M. E. Church.

AMERICAN BOARD OF OTOLARYNGOLOGY—An examination was held by the American Board of Otolaryngology on October 19, 1925, at the Cook County Hospital, Chicago, with the following result:

Passed	120
Failed	23
Total Examined	143

The next examination will be held in Dallas, Texas, on April 19, 1926. Applications may be secured from the Secretary, Dr. H. W. Loeb, 1402 South Grand Boulevard, St. Louis, Missouri.

DR. J. T. MARTIN, Oklahoma City, delivered a health lecture to the students of Mount St. Mary's College recently.

DR. O. A. PIERSON, formerly of Woodward, has moved to Oklahoma City. Dr. Pierson has resided at Woodward for over 23 years.

DR. H. H. WILSON, Frederick, who has been sick for the past two months at Oklahoma City and Norman, has returned home feeling much better.

DR. H. H. CLOUDMAN, Oklahoma City, was the principal speaker recently at a Parent-Teachers Association meeting in one of the High Schools of Oklahoma City.

DR. R. H. FOX, Altus, has been appointed physician and surgeon for the Frisco Railroad, succeeding Dr. W. E. Sanderson, who has held that position for 10 years.

OKLAHOMA PHYSICIANS to the number of 250 registered on the first day of the Southern Medical Association meeting at Dallas. Oklahoma had probably the next to the largest representation or any of the States represented at the meeting.

JACKSON COUNTY MEDICAL SOCIETY met in regular meeting with a dinner on November 5, at Altus. The business session was held at the office of Dr. J. B. Hix and several clinical cases were presented. Thirteen doctors were present. The next meeting will be held at Eldorado in December.

WE PUBLISHED a statement last month that Dr. H. M. Stricklin, Tonkawa, had been appointed Chairman of the State Rehabilitation Committee of the American Legion; this should have read that Dr. Stricklin had been appointed Chairman of the State Hospitalization Committee instead. Dr. Hugh Scott, Medical Officer in Charge of the U. S. Veterans Bureau Hospital No. 90, Muskogee, is Chairman of the State Rehabilitation Committee.

WOODS COUNTY MEDICAL SOCIETY met November 24th, and elected the following officers for 1926: President, Dr. E. P. Clapper, Waynoka; Secretary-Treasurer, Dr. O. E. Templin, Alva; Vice-President, Dr. B. W. Saffold, Freedon, and Censor, Dr. D. B. Ensor, Hopeton. Papers were read by Dr. Arthur E. Hale, Alva, on "Scarlet Fever and its Prevention"; Dr. Elizabeth A. Grantham a paper on "Post Radiation Acidosis." A banquet followed at the Methodist Church given by Dr. George N. Bilby, at which Dr. A. S. Risser, Blackwell, president-elect of the Oklahoma State Medical Association, was the principal speaker, using as his subject "Scientific Doctors".

## EYE, EAR, NOSE and THROAT

Edited by Jas. C. Braswell, M. D.  
726 Mayo Bldg., Tulsa

Studies on the protein content of the aqueous humor; the effects of miotics and mydriatics.  
Adler, F. H., Arch. Oph., 1925, liv, 265.

The author conducted experiments to prove Seidel's contention that an increase in the protein contents of the aqueous humor following instillation of eserine is an indication of increased secretion by the ciliary body. The protein content was determined by refractometric and nephelometric methods.

After the use of eserine there was an average increase of 44 per cent in the protein content of the aqueous humor. The use of atrophine was followed by an average increase of 1.8 per cent. When atrophinization was followed by the use of eserine an average decrease of 16 per cent was found. After the use of pilocarpine the protein content did not increase. Removals of the ciliary ganglion, while dilating the pupil, lowered the protein content of the aqueous humor.

Ephithelial dystrophy and recurrent erosion of the cornea as seen with the slip lamp. Gifford, S. R.—Arch. Ophth., 1925, liv, 217.

Gifford believes that conditions called vesicular keratitis, disjunction of the corneal epithelium, and intermittent neuralgic vesicular keratitis have a common origin and are best described as epithelial dystrophy of the cornea, a classification suggested by Fuchs.

Vesicles and acute pain may or may not be present. Although the epithelium may be quickly regenerated, it is not firmly attached and recurrences are common. In Gifford's cases, folds of Descemet's membrane were noted. The changes in the cornea seem to be due to lesions in the finer nerve branches of the cornea. The tension is usually normal.

The author believes that when glaucoma occurs, the condition is another manifestation of vasomotor instability.

Osteomyelitis of the Cranial bones secondary to paranasal sinus operations—Lillie, H. I.; Ann. Otol., Rhinol. and Laryngol., 1925, xxxiv, 353.

Osteomyelitis secondary to disease of the paranasal sinuses is a very grave complication. The condition may persist for a long period. In Bryan's case it was apparently controlled by a radical operation, but after a period of eleven months, the patient died from a subdural abscess.

Radical measures are necessary even though deformity may result. In dealing with osteomyelitis secondary to disease of the paranasal sinuses, the present day conservative attitude toward radical paranasal sinus operations which result in a high percentage of cures but some deformity must be discarded. The X-Ray may show a picture quite typical of syphilis but when the sinus disease is present osteomyelitis must be suspected.



Capillary Suction as an Aid in the Treatment of Ear, Nose and Throat Diseases—Beck, J. C., Pollock, H. L., and Lederer, F. L., *Laryngoscope*, 1925, xxxv, 402.

The authors have employed capillary suction very extensively in their clinic, using various devices and forms of capillary tubes suitable to the areas treated. This method is of advantage because it avoids trauma, allows direct inspection, it has a wide application in work about the nose and throat and ear. In operative work it renders sponging unnecessary.

### BACTERIOLOGY and PATHOLOGY

Edited by Wm. H. Bailey, A.B. M.D.  
Wesley Hospital, Oklahoma City

"Archives of Pathology and Laboratory Medicine"  
—New monthly journal to be published by the A. M. A. announced in the *Journal of the A. M. A.*, October 31, 1925.

As stated in the announcement there are already several periodicals devoted to pathology, both in this country and abroad, however, it was the belief of the various boards and committees appointed to consider this subject, that none of them were representative of all of American pathology.

The selection of the following men as the first editorial board: Dr. Ludvig Hektoen, Chicago, chairman of the board; Dr. Jas. Ewing, New York; Dr. W. G. MacCollum, Baltimore; Dr. William Ophuls, San Francisco; Dr. Alfred Stengel, Philadelphia; and Dr. S. B. Wolbach, Boston, will insure for the paper the highest standard of scientific efficiency and the assistance of the best authorities on Pathology and Laboratory Medicine in America. It will be a means of developing a purely American Pathology, the same as there has been developing an American Surgery and an American Internal Medicine.

The periodical will be broad enough in its scope to include original articles in the field of pathology and laboratory investigation, abstracts of current literature on pathology, the transactions of important pathological societies, news of those working in the field of pathology, a department of medicolegal pathology, reviews of new books on pathology, and monthly reviews of the present state of our knowledge of such topics as heredity, constitution and disease, lymphogranulomatosis, cancer, allergy, nephritis and nephrosis postmortem methods and new technical methods used in laboratories.

The announcement closes with the following:

The growth of scientific medicine has resulted, not in a departure from the fundamental investigations of anatomic changes within the human body during and subsequent to disease, as was perhaps expected by some, but, indeed, is an intensification of the belief that a knowledge of pathology is absolutely fundamental to successful diagnosis and treatment in every field of medicine. Virchow, it has been pointed out, realized that pathology embodies both the anatomy and the physiology of the abnormal organ. German investigators, however, concentrated their attention on morbid anatomy, and Great Britain and

France up to fairly recent times practically limited pathology to anatomic findings in the post-mortem room. The modern experimental conception of pathology, as pointed out by Flexner, has developed a type of pathologist who is at the same time investigator and teacher in the school of medicine and pathologist to the hospital, in intimate contact with the diagnosis and treatment of disease. Indeed, the modern medical school is likely to be built around the pathologic unit as the very heart of the institution. In this situation, when pathology as a science is beginning to come wholly into its own, it is well that American physicians should have from the first an authentic, independent organ ready to serve for the advancement of knowledge.

"THE NEW NOMENCLATURE IN BACTERIOLOGY"—Dr. Chas. Phillips, Richmond, Va., *So. Medical Jr.*, Nov., 1925.

The sole object of the author's paper was to present a brief review of the recent proposal of the Society of American Bacteriologists to standardize the nomenclature of bacteriology in English.

The Society's committee has been at work on this re-classification for many years and submitted a report in 1923 in the form of a 422 page book, "Bergey's Manual of Determinative Bacteriology".

Bacteriology in general, is much wider in its scope than the narrow field with which the physician comes in contact. The group of disease producing bacteria is very small compared with the vast number met with in the allied sciences. The adoption of a bacterial terminology conforming to a botanical nomenclature which considers the family, species and genus of an organism must necessarily involve a tremendous volume of work. No other organization is better fitted for this work than the Society of American Bacteriology including in its membership as it does, men in all branches of this science.

Medical bacteriologists must fall in line with this new terminology, although, the names of many of our most familiar organisms are so changed that they are scarcely recognizable. Just as we have been made world citizens in a political sense, whether we wish to or not, so we must become international in our scientific relations if we are to retain our places in the scientific world.

It will be difficult for many to use the new terminology because we are all more or less inclined to follow the lines of least resistance. The metric system of weights and measures has been legal in America for 10 or 20 years, and yet how few of the younger people even know it today. It never can be established for every day use until it is popularized and taught side by side with the old system in our public schools. In the same manner the new classification of bacteria must be taught in our medical schools simultaneously with the terminology in common use today, so that the transfer to the new nomenclature will be gradual. This must be persisted in until the new finally supplants the old. The transfer of *Bacillus typhosus* to *Eberthella typhi*, of *B. coli* communis to *Escherichia coli*, and of *Bacillus diphtheriae* to *Corynebacterium diphtheriae* will be a slow process of evolution in the average medical mind.

Text-books on bacteriology must carry a comparative index of both the old and new names, writers of articles on bacteriological subjects must use both classifications side by side, and above all, students of today must learn both systems and have them so fixed in their minds that they can use one as readily as the other.

Gastric Analysis; Joseph W. Larimore, A. B., M. D., St. Louis—*The Journal of Laboratory and Clinical Medicine*, October, 1925.

Kopeloff claims that single determinations of gastric acidity by the Rehfuß method are not sufficient on which to base conclusions, because they do not take into consideration individual variation.

The author in his experience on gastric contents uses the fractional gastric analysis, the technique is as follows: the Rehfuß tube is used. The patient is fasting and without fluid from the previous evening. The fasting gastric contents are aspirated, and the test meal is taken. The test meal consists of one shredded wheat biscuit (ground) and 400 c.c. of water with 1 c.c. of pheno-sulphone-phthalein. Aspirations of 10 c.c. samples are made every twenty minutes for five samples and with the fifth, the stomach is emptied. Before and after each aspiration one syringe full of air is injected. The fasting contents are measured, examined, and titrated. Each sample is titrated and examined. The last sample is measured.

The author states that fractional gastric analysis does not reveal the physiology of the stomach in all separate phases and does not exhibit these in an absolute evaluation, but rather the curve of the fractional analysis is the composite resultant of the present factors in the physiologic status of the stomach.

The valuable data of gastric secretions have not been better developed than by the above method. It does demonstrate alterations in gastric secretion and motility which are more or less diagnostic and helpful therapeutically.

Levinson Test in Tuberculous Meningitis; A. C. Pons, M. D. and Thelma Fletcher, Philadelphia, Pa.—*The Journal of Laboratory and Clinical Medicine*, October, 1925.

The precipitation test of Levinson depends upon these chemical reactions, first, proteins are precipitated as albuminates when treated with metallic salts such as zinc chloride, bichloride of mercury, etc., and precipitated as insoluble salts, when treated with weak organic acids, such as tannic acid, sulpho-salicylic acid, etc.

Levinson claims that in tuberculous meningitis that the bichloride precipitate is twice that of the sulpho-salicylic acid. The authors found in support of Levinson findings that in a number of cases in which they were able to establish the presence of the tubercle bacilli in the spinal fluid, either before death or at autopsy, the one to two rates of the two precipitates held good in practically all of their cases, furthermore, that in most cases they got this ratio before finding the bacilli.

The following routine was observed: The spinal fluid was received in two sterile test tubes, one being used for cell count, differential and precipitation test. Small test tubes 8 m.m. in diameter were used. We placed 1 c.c. of spinal fluid in each of two test tubes. To one we add 1 c.c. of a one per cent mercuric chloride and to the second 1 c.c. of a three per cent sulpho salicylic acid. The tubes are shaken well, stoppered and stood at room temperature for 24 hours. Measure the column of precipitate in millimeters.

Summary: A 1:2 ratio is very suggestive but not pathognomonic of tuberculous meningitis.

The use of stronger reagents along with those proposed by Levinson is suggested as increasing the diagnostic value of the test.

The test should be performed in every case of meningitis because (1) it is easy to do. (2) it is inexpensive. (3) It gives valuable diagnostic information.

## TUBERCULOSIS

Edited by L. J. Moorman, M.D.  
912 Medical Arts Bldg., Oklahoma City

The Effect of Mercurochrome in Experimental Tuberculosis of the Rabbit. H. J. Corper, Saul Mebel and Rose Silver—*The American Review of Tuberculosis*, October, 1925.

This series of experiments was undertaken to determine the local tissue toxicity of mercurochrome as well as its bacteriostatic and bactericidal action and its possible value in the treatment of tuberculosis by local and intravenous administration.

Four dogs were given 0.2 cc. of 2, 1 and 0.5 per cent. and four others were given 0.1, 0.05 and 0.01 per cent solutions of mercurochrome intracutaneously in order to learn the effect of intracutaneous injections of varying concentration. Each dog received 6 injections, 2 of each strength on the shaved abdomen. The findings were almost identical in the four duplicate dogs. The site of injection of 0.2 cc. of 2% mercurochrome became the color of mercurochrome at once with purple, raised ring of congestion around the deeply tinted central site of injection. There was apparently no diffusion of mercurochrome except that occurring on injection. The ring of congestion faded after 3 days leaving the highly colored center with an elevated, indurated margin. After 5 to 7 days the mercurochrome stained epidermis sloughed out leaving an ulcer with undermined edges and a pale pink neurotic floor. This was replaced in about 12 days by new granulation tissue, with healing in 3 to 4 weeks. The lesions produced by the 0.2 cc. injections of 1 and 0.5% solutions differed only in size and rate of healing from those produced by the 2% solution. The site of the injection of the 0.2 c.c. of 0.1% solution became pink with an elevated margin at once, with only a small elevated, indurated nodule which was free from color remaining after 3 days. There were no visible evidences of the injection after 1 week. The 0.05% solution produced a similar though smaller lesion which cleared up in three to four days while the 0.01% produced no perceptible changes. Sections taken 12 and 22 days after injection showed microscopically a skin ulcer with a granulation floor in various stages of scar-tissue formation.



It is therefore evident that intracutaneous injections of 0.2 cc. of concentrations of mercurochrome as low as 0.5% produce distinct tissue destruction while injections of 0.1 and 0.5% produce evident, though transient pathological tissue changes.

A series of 21 dogs were injected intratracheally to determine the value of mercurochrome in the local treatment of pulmonary tuberculosis and in the treatment of tuberculous cavities, also its effect on normal lung tissue. Five dogs were given 2.5 or 5 cc. of 2%; five, 2.5 or 5 cc. of 1%; three, 5 cc. of 0.5%; three 5 cc. of 0.1%; three, 5 cc. of 0.01% and 2, as controls, 10cc. of sterile normal salt solution. The 2 dogs given 5 cc. of 2% solution intratracheally died after 20 hours and 3 days respectively from acute hemorrhagic pneumonia. Of the 3 receiving 2.5 c.c. of 2% solution, 1 was examined after 1 hour and showed an early pneumonic consolidation of both lower lobes; 1 died 22 hours after injection and showed a marked, acute, hemorrhagic pneumonia of both lower lobes; the third dog, examined after 12 days, showed several areas of consolidation in both lungs. Two dogs were given 5 cc. of 1% mercurochrome; 1, examined after 24 hours, showed a complete hemorrhagic pneumonia of the lower lobe of the left lung with a few pneumonic areas in the upper lobe of the right; the other dog died 22 days after injection and showed an organizing pneumonia with multiple focal abscesses in the lower lobes of both lungs. Of the 3 dogs given 2.5 cc. of 1% solution, one examined one hour after injection showed an early acute pneumonia of the lower lobes of both lungs and of the middle lobe of the right lung; another examined after 24 hours showed an acute hemorrhagic pneumonia of the upper lobe of the right lung and of both lower lobes; the third dog, examined 6 days after injection, showed a resolving and organizing pneumonia of the lower lobe of the left lung. The lungs of these 10 dogs were examined microscopically; the immediate effect was intra-vascular hemorrhage, the latter effects resembled a slowly resolving pneumonia with many local abscesses. Three dogs were given 5 cc. of 0.5% solution and were examined 24 hours, 3 days, and 2 weeks, respectively, after injection. The effects were similar to those produced by the 1 to 2% solutions. Three dogs received 5cc of 0.1% solution and were examined in 24 hours, 4 days, and 1 week. They showed marked tissue injury with more rapid resolution and repair however, than the dogs given higher concentrations showed. The dogs given 5cc of 0.01% mercurochrome and examined 24 hours, 3 days, and 1 week after injection showed few changes. The 24 hour and 3 days specimens showed a few suspicious areas while the 1 week lungs were negative. The lungs of the 2 dogs given 10 c.c. of sterile normal salt solution intratracheally as controls were negative on examination.

Eight dogs were given intrapleural injections of 0.1, 0.5, 1 and 2% solution of mercurochrome to study its effects on the normal pleura and to determine its antiseptic value in tuberculous empyema. Two dogs were given 5cc. of 2%; two, 5 cc. of 1%; two, 10cc. of 0.5% and two, 10cc. of 0.1% solutions. The pleural cavities of all these dogs showed marked changes; those receiving the 2, 1, and 0.5% solutions showing hemorrhagic pleurisy with acute hemorrhagic pneumonia, while those given the 0.1% solution showed a dry fi-

brinous pleurisy. These experiments together with the fact that De Witt found mercurochrome inhibitory to the tubercle bacillus in vitro in dilutions above 0.02%, while it required 24 hours exposure to 1% solution to kill them, would indicate that it has little value as a local antiseptic in tuberculosis whether used in pulmonary cavities or by intrapleural injection for empyemas or sinuses.

Fifty-four rabbits were used to determine the effect of intravenous injection of mercurochrome on tuberculosis. The rabbit was chosen for this experiment both because the dose of mercurochrome for it has been standardized and because experimental tuberculosis is usually pulmonary in it. Half the rabbits were infected with a virulent bovine tubercle bacillus in doses of 0.01, 0.0001, and 0.000,001 mgm. per pound body weight, the other half were infected with a human strain in amounts of 10, 1, and 0.1 mgm. per pound body weight. Each set receiving the same infecting dose was treated the same. One set received 5 mgm. of mercurochrome per kilo body weight, 1 hour after infection and daily for two weeks. The object of this early treatment was to have the mercurochrome act before the bacillus lodged in the tissues. Treatment for another set was started 1 week after infection and repeated daily for two weeks. The third set was given 2 mgm. of mercurochrome per kilo 1 day after infection and daily for 8 days. The lungs, liver, spleen and kidneys were examined in all these animals including the untreated controls and no appreciable effects from the treatment were seen regardless of when it was started.

### OBSTETRICS and PEDIATRICS

Edited by Carroll M. Pounders, M.D.  
532 Liberty National Building, Oklahoma City

Observations on the treatment of acute cyclic vomiting of childhood with glucose solution and insulin—David Greer, *Southern Medical Journal*, June, 1925.

Glucose and insulin were administered to two unusually severe cases of acute cyclic vomiting in children with markedly beneficial results. The author thinks the good results can be attributed to the insulin. Attention is called to the fact that liberal parenteral administration of glucose solutions alone has not been very beneficial. 250 to 300 cc. of a five per cent solution of glucose in normal saline was given sub-cutaneously followed in about half an hour by ten units of insulin hypodermically. The administration of glucose alone had previously resulted in glycosuria without relieving the symptoms. When given combined with insulin, sugar combustion seemed to take place normally, the ketosis subsided and there was marked improvement. It is suggested that there may be a decrease of sugar metabolism in cyclic vomiting.

Light and the antirachitic factor—C. E. Bloch, M.D., and Frans Faber, M.D.—*American Journal of Diseases of Children*, October, 1925.

The authors very carefully compared clinical experiences and observations of the action of light on different diseases with its effect on experimen-

tally produced diseases in animals. The chief object was to learn more about the relation between light and some of the vitamins, especially the so called antirachitic vitamin and vitamin A substance. Their conclusions are summed up as follows: From the present investigations and considerations thereon it appears that (1) Light and particularly ultraviolet rays have a stimulating effect on the organism which chiefly benefits those functions that are depressed. The curative action of light on rickets and tetany can be explained by such a stimulating effect. It is certain, however, that cod-liver oil has the same healing action on rickets and tetany as light has, although the former, in the quantities that can be given to children, acts more slowly and less surely than light. (2) As this effect is not due to the vitamin substance, there must be a stimulating factor in cod liver oil similar to that in ultraviolet light in addition to the vitamin A substance. It is pointed out that Alfred F. Hess and Steenbock, Nelson and Black have shown by animal experimentation that fats and other food materials, which are without effect on rickets, can be rendered active for experimental rickets merely by exposure to ultraviolet light. Eleanor Margaret Hume and Hannah Henderson Smith have shown that exactly the same is the case with sawdust. (3) This proves that the non-specific stimulating factor must be the ultra violet rays. (4) It is believed that the hypothetic antirachitic vitamin does not exist.

The comparative nutritional value of white and whole wheat flour—C. Ulysses Moore, M.D., and Jessie Laird Brodie, B.A.—Archives of Pediatrics, Sept., 1925.

Three litters of white mice were used containing twenty-eight animals. One-half of each litter was given a chemically adequate and balanced diet containing 'best patent unbleached flour' as their only source of starch and of vitamin B. The other half of each litter was given the same basal diet, the "patent flour" being replaced with a whole wheat flour containing the entire kernel. A properly balanced ration was made up by adding a purified casein, butter, and a salt mixture. The group fed on whole wheat increased in weight four times as rapidly as did the ones on white flour. The whole wheat seemed to improve the appetite so that this group consumed twice the food eaten by the ones on white flour, making the gain in weight, per unit of food consumed, double that made by the group fed on white flour. Those on whole wheat were healthy, happy, contented and had much greater resistance to cold weather while many of those on white flour developed paralysis, the fur became clumped and abnormally oily, and three died. When the white flour group were given the whole wheat diet, they rapidly gained weight, their fur became normal and they seemed contented, this furnishing positive as well as negative proof of the superiority of whole wheat.

It is pointed out that the dietary difference between white and whole wheat flours is largely a difference in vitamin B. Modern milling removes this necessary food factor. The experiment demonstrated that, based on the relative cost of the two flours, whole wheat flour is worth nearly twice as much for nutritional purposes as white flour.

### Bacteriological Findings in Acute Dysentery in Children—Geo. F. Klugh, M.D., Atlanta, Ga.

A preliminary report of work done on acute dysentery in children with blood and mucus in the stools is presented. It was found that only two organisms are usually responsible, namely: bacillus dysenteria and streptococcus. The dysentery bacillus was found to be serologically and culturally of the Flexner type. Streptococci in abundance in the stools are secondary to respiratory infections, especially tonsillitis. It is believed that carriers bear the same relation to dysentery as to other bacterial diseases. Cultures of stools from normal infants are negative for the dysentery bacillus.

There is no known method of ridding a carrier of his infection. Most children probably acquire immunity by ingestion of small numbers of more or less attenuated organisms from carriers. There is less immunity during the second summer than at any other period during life. Vaccination is believed to be a good prophylactic measure, especially during epidemics. Anti-dysentery serum is effective if given early. Theoretically lactose and acidophilous milk seem to be ideal foods, but probably small amounts of easily digested foods are absorbed before they reach the infected area.

### ORTHOPAEDIC SURGERY

Edited by Earl D. McBride, M. D.  
1006 First Nat'l Bank Bldg., Oklahoma City

### Clinical Case Report.—Severe Infantile Paralysis Deformity.

Case 1. Miss M. S., age 14, female, white, school girl.

Examined in Clinic May 9, 1923. Referred by State Health Officer, Dr. A. R. Lewis.

History: At the age of three years had attack of infantile paralysis. Both lower extremities were affected. The right leg gradually recovered to the extent that it could be used with the aid of crutches. The left has never been used since the attack and she has always used crutches.

Examination: The left leg has practically no motor power. There is slight power of hip flexion due to the action of the tensor fascia femoris. This muscle has caused a flexion deformity at the hip of 15 degrees. The femoral head is in the socket but the hip is practically flail. There is a marked knock knee with slight action in the biceps and the foot is flail. The right leg has good muscular action but the posterior tibial muscle is paralyzed giving her a marked flat foot. The left leg measures about 2½ inches shorter than the right.

Treatment: She was advised to have the hip deformity corrected, the knee stiffened by arthrodesis and the ankle stabilized by astraglectomy. She refused the knee joint arthrodesis. However, the tensor fascia femoris was released at the anterior superior spine of the ilium by the Soutter method and the knock knee corrected by forcible stretching and manipulation without osteotomy. A plastic spica was applied from chest to toes and worn for six weeks. The case was then lost track of for over one year. Upon return the hip and knee deformities seemed well corrected. A brace was applied which would limit hip action to flex-



ion only, would entirely limit knee action and limit ankle action to slight flexion and extension. The extreme flailness of the ankle and foot seemed to be a handicap and the ankle movement was therefore stabilized by removal of the astragalus and displacing the foot backward according to the Whitman technic. On application of a brace once more she became able to use the leg for weight bearing.



BEFORE AND AFTER CORRECTION OF DEFORMITY.

One year later, September 9, 1925, a new brace was made consisting of a close fitting celluloid casing from groin to the ankle and a stop hip joint, pelvic band. This allowed her to wear a nice shoe on her foot which matched the right foot on appearance and as a stocking could be worn over the brace, the cosmetic effect was much improved.

Within two months she was using only a light walking stick for support as she walked.

Discussion: The regrettable feature of this case is that she had been told by more than one physician that nothing could be done. The result was, she failed to use the affected leg and an undue amount of atrophy and shortening was the result. If the paralyzed leg had been properly braced from the start, the bones would have maintained normal growth and no deformity would have occurred.

Report of the bone and joint section: Southern Medical Meeting, November 9, 1925.

The Clinic Monday at the Hella Hella Temple Hospital for Crippled Children was unusually instructive and interesting. The class of work certainly demonstrated that the big Eastern Clinics have no monopoly upon progressive surgical technic.

Doctors W. B. Carroll, Sim Driver and others demonstrated among many other interesting cases the end results of twenty-five cases of spastic paralysis upon which they had performed the sympathetic ramisectomy as advised by Doctors Royle and Hunter of Australia. The conclusions of the operators as well as the spectators were that the operation produced a very definite improvement in the gait. It did not produce, however, any spectacular relief of spasticity and in most cases the results were very indefinite. The question was raised as to what caused the improvement. Was it due to a release of the plastic tone as described by Royle or was it due to the increased

circulation which was noted in all cases. Further conclusions were that at least a period of one year should be permitted to elapse before attempting any further cases so as to be able to judge how permanent the improvement would be.

The program of this section consisted of papers which are of great practical interest to one in general practice. It is hoped that they will receive proper attention as they appear later in the Southern Medical Journal.

—o—  
Treatment of Chronic Recurrent Dislocation of Shoulder by Crucial Capsular Plication.—W. L. Keller, *Annals of Surgery*, January, 1925, p. 143.

Keller reports eleven cases treated by plication of the anterior portion of the capsule, which he explores by the axillary route along its posterior margin and directly over the humeral head. The capsule is freed from the axillary contents when a crucial incision, one limb upward and one cross-wise, is made in it. The margins of these incisions are overlapped by a type of mattress sutures reducing the laxity of the capsule to a minimum. The operation was conceded a failure in one case. The rest have been successful.

As nine of the cases were operated upon in 1923 and 1924 it is possible that the chapter on recurrences is not permanently closed.

—o—  
Abduction Treatment of Fracture of Neck of Femur.—R. Whitman, *Annals of Surgery*, January, 1925, p. 374.

In a well illustrated and brief article Whitman very definitely, if not dogmatically, expounds his well-known ideas of the proper care of fractures of the neck of the femur by the abduction spica, and concludes his robust polemic with the following pungent paragraph: 'At the present time the opposition to the general adoption of the abduction treatment is rather of the nature of inertia than of loyalty to the ancient ritual, the chief objection being, apparently, that its application, particularly the adjustment of a secure and comfortable plaster spica, requires more skill and experience than is possessed by the 'average worker.' The proposition, in effect, that incompetence should disqualify the treatment rather than the surgeon, however, logical under the old dispensation is no longer tenable. For traditional authority having been disproved and discredited can no longer assure immunity for inadequacy and inefficiency, and neglect.'

—o—  
Haematogenous Osteomyelitis.—By William T. Doran and Leslie Brown, *Surgery, Gynecology, and Obstetrics*, May, 1925, p. 658.

The report is taken from the Surgical Service of the Bellevue Hospital of the last four years. On account of the age limit none of the patients was over twelve and one-half years of age.

There are six tables showing comparative figures under the headings of age, organism found, part involved primarily, bone affected, treatment, duration and progress.

There are eight skiagrams showing bone lesions during the course of treatment. The report seems very impartial and records the bad results as well as the good. The conclusion of the authors follows:

Conclusion: The necessity of early diagnosis and proper surgical treatment cannot be too vigorously advocated. Too few of the cases in this series were recognized as osteomyelitis in early stage, when proper surgical intervention would have promised a short convalescence. The majority of these that did receive early care recovered within four months on the average. Early surgical treatment is the only means of reducing the morbidity and mortality. If sufficient drainage is instituted in the early stages destruction of the cortex is avoided and convalescence is short. If the time from onset to operation is measured in hours, the convalescence is measured in weeks; if measured in days, the convalescence is measured in months or years.

### BOOK REVIEWS

**SYMPTOMS OF VISCERAL DISEASE**, a Study of the Vegetative Nervous System in its Relationship to Clinical Medicine, by Francis Marion Pottenger, A.M., M.D., LL.D., F.A.C.P. Medical Director, Pottenger Sanatorium for Diseases of the Lungs and Throat, Monrovia, California; Author of: "Clinical Tuberculosis", "Tuberculin in Diagnosis and Treatment", "Muscle Spasm and Degeneration", etc, Third Edition, with eighty-six illustrations and ten color plates, cloth 394 pages, price \$6.50, C. V. Mosby Company, St. Louis, 1925.

**A TEXT-BOOK OF MEDICAL DIAGNOSIS**. (Third Edition, Entirely Reset) By James M. Anders, M.D., Professor of Medicine, Medico-Chirurgical College, Graduate School of Medicine, University of Pennsylvania; and L. Napoleon Boston, M.D., Associate Professor of Medicine, Graduate School of Medicine, University of Pennsylvania. Third Edition, Entirely Reset. Octavo of 1422 pages, 555 illustrations, some in colors. Philadelphia and London; W. B. Saunders Company, 1925. Cloth, \$12.00 net.

This is one of the completest volumes ever issued concerning medical diagnosis. Not only does it deal widely with the diagnosis of the strictly medical matter, but it also undertakes to present the diagnosis of the border line case and that type of cases which ordinarily come under the observation of the family physician or medical attendant before they have the advantage of surgical consultation. This is of the greatest importance to the patient as upon prompt recognition of signs and symptoms his future welfare if not life may hinge. The work contains the diagnosis of all the obscurer conditions met with in wide general work and has been brought up to date in every particular.

**THORACIC SURGERY**. The Surgical Treatment of Thoracic Disease. By Howard Lilienthal, M.D., Professor of Clinical Surgery at Cornell University Medical School. Two octavo volumes totaling 1294 pages, with 90 illustrations, 10 in

colors. Philadelphia and London, W. B. Saunders Company, 1925. Cloth \$20.00.

The greater part of these two volumes is devoted naturally to Surgical Diseases of the Lungs, though no other phase of Thoracic Surgery is relegated to a minor position. In addition to the wide field covered in the text there are special articles on Physiology by Evarts A. Graham; Roentgenology by Leopold Jaches; General Anesthesia by William Branower; Blood Transfusion by Reuben Ottenberg; Thoracic Aneurysm by William C. Lusk and the treatment of Pulmonary Tuberculosis by Induced Pneumothorax by J. Burns Amberson and Andrew Peters. The author discusses at length the indications pro and con for the use of local anesthesia in thoracic surgery. He makes out a good case for the use of local anesthesia, noting however, that class of cases wherein it is best to use a general anesthetic if possible. More than one hundred and twenty pages are devoted to a discussion of the indications of artificial pneumothorax. It is listed as a highly valuable adjunct in the treatment of certain types and conditions, but does not overlook the need for every other measure which may benefit the case in question. The volumes are finely and profusely illustrated, many in color.

**ALLERGY, Asthma, Hay Fever, Urticaria and Allied Manifestations of Reaction**. By William W. Duke, Ph. B., M.D., Kansas City, Mo., with seventy-five illustrations. Cloth. 339 pages. Price \$5.50. C. V. Mosby Company, St. Louis, 1925.

In simple concise language, Dr. Duke has presented the difficult subject of Allergy. The book is decidedly clinical and was written for the general practitioner by a clinician of practical experience. It is well worth a busy practitioner's time to read the book in its entirety for he will be struck with the frequent and protean manifestations of hypersensitiveness and be able to understand numerous of his own cases that have heretofore gone unclassified and unexplained. There are numerous case reports placed throughout the book, which increases its instructiveness. The illustrations are numerous, the legends clear and worthwhile and adapted by the author admirably to clarify the subject matter.

The bibliography is extensive and very properly placed together in the back of the book.

—R. A. Wolford.



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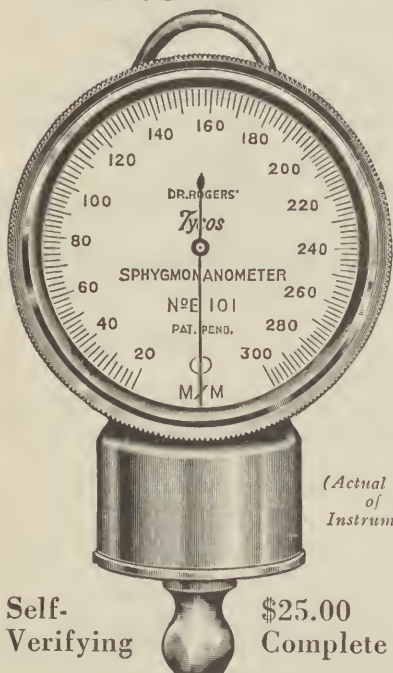
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## THE PREVALENCE OF TYPHOID CARRIERS IN A GENERAL POPULATION

The survey reported on by S. W. Welch, Sophie A. Dehler and Leon C. Havens, Montgomery, Ala. (Journal A. M. A., Oct. 3, 1925), included 1,076 healthy persons employed in the dairy industry of Alabama. There were 1004 men and seventy-two women. Both feces and urine were obtained from each person an average of 2.3 times. Thirty-nine healthy typhoid carriers, thirteen paratyphoid A carriers and three paratyphoid B carriers were found, making a total for both typhoid and paratyphoid of fifty-five or 5.4 per cent. Three hundred persons in a community where, until a few years ago, a very high typhoid rate existed, yielded thirty-one carriers. If these are excluded from the general survey, there still remain twenty-four carriers of typhoid and paratyphoid among 776 persons, or a rate of 3.1 per cent. This study presents certain differences from those heretofore made. Not only were specimens of urine as well as feces obtained, but repeated examinations were made. An analysis of the positive results showed that thirty-four carriers were found on the first examination. Subsequent examinations resulted in the detection of twenty-one additional carriers who would have been missed had only a single specimen been obtained. Furthermore, there were eighteen urinary typhoid and five urinary paratyphoid A carriers. If feces only had been examined these would have been missed, leaving only eleven carriers, who would have been detected by a single examination of the feces, or a rate of 1.0 per cent. No definite number of examinations will exclude the possibility of the existence of the carrier condition. In three instances, positive results were not obtained until the sixth examination. It is apparent that many typhoid carriers exist against whom there is no epidemiologic evidence of responsibility for disease production. This high carrier rate in a general population may indicate that a larger proportion of cases becomes carriers than has previously been supposed. A study of patients who have recovered is now being made in Alabama with this point in view.

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